East Idaho Corridor Loop Plan

US 93 SH 33 SH 28 SH 22 US 20 US 26

East Idaho Corridor Loop Plan

FINAL REPORT

JULY 2006

PREPARED FOR
IDAHO TRANSPORTATION DEPARTMENT
DISTRICT 6
RIGBY, IDAHO

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SECTION 1: EXECUTIVE SUMMARY

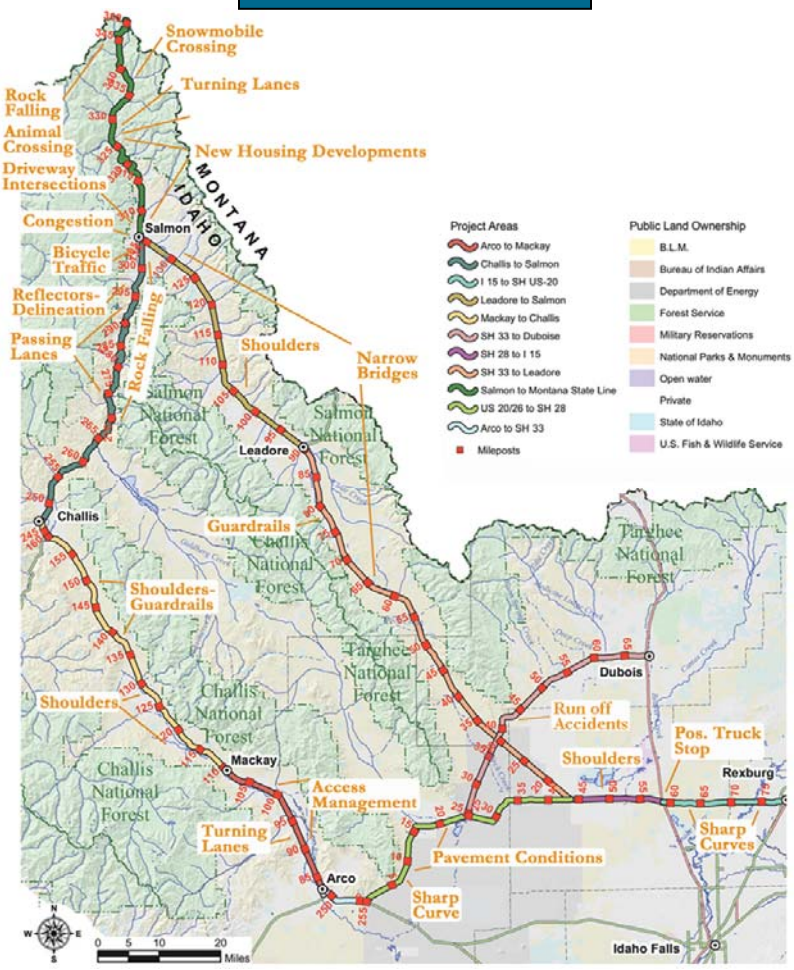
1.1 INTRODUCTION AND BACKGROUND

The East Idaho Corridor Loop Plan (EICLP) involves the review and planning for potential improvements to portions of US 93, US 20, SH 28, SH 22, and SH 33 in the eastern Idaho region. Together, these roadways provide a "loop" connection between several rural communities and other regional destinations (see the *corridor study area map* on page 7). The Idaho Transportation Department (ITD) has recognized the significance of the corridor to the eastern Idaho region and has committed to the effective planning of the area to meet the long-term needs of the public in the region, and to ensure that the continued efficiency of these routes is maintained. The Idaho Transportation Department commissioned this report to document the results of a study that addresses the role of the corridor in terms of economic vitality, the environment, right-of-way preservation, and the impacts of local land use on corridor operation and safety. The study also looks at all transportation modes, including public transportation, air, bicycle and pedestrian considerations, freight, and the needs of individuals in personal automobiles.

1.2 KEY ISSUES IDENTIFIED

The collection of comments received through the public involvement activities identified key issues as illustrated in the map shown at right. In addition, Project Partner Workshops in the Challis and Salmon area identified signage requests and needed urban improvements such as bike/pedestrian pathways, crossings, congestion mitigation needs, and lighting. An Agency Workshop identified a cooperative project between ITD and the Idaho Department of Fish and Game to remove brush on SH 28 along the Lemhi River to improve visibility and reduce animal collisions.

East Idaho Corridor Loop Plan Issues Map



1.3 PURPOSE, NEED, AND GOALS

The corridor purpose statement was developed to outline the purpose of the Plan. The list of needs and corridor goals were developed based on input received from the public involvement activities and the technical assessment and operational needs of the corridor. The purpose and need statement, along with the goals, were used to determine and evaluate potential alternatives to identify the final Plan recommendations.

CORRIDOR PLAN PURPOSE

The purpose of the Eastern Idaho Corridor Loop Plan is to assess roadway conditions and growth patterns within the corridor study area and to develop recommendations for roadway management and upgrades to meet the needs of the corridor and residents for the next 20 years.

CORRIDOR NEEDS

- Safe design of corridor facilities with attention to:
  - Roadway and shoulder width
  - Horizontal curvature
  - Number and location of passing lanes
  - Warning and protection devices such as reflectors and guardrails
  - Intersection safety and capacity
- Safe access to new development adjacent to the corridor
- Year-round connectivity to local, regional, and statewide destinations
- Adequate bike and pedestrian facilities to support local and regional use
- Adequate signage to support adjacent community needs
- Decreased vehicle / wild and domestic animal collisions
- Sufficient bridge condition and capacity to meet corridor and user needs

CORRIDOR PLAN GOALS

The goal of the Plan is to address the needs of the transportation routes by reviewing the existing traffic, land use, and environmental conditions to improve the safety and physical characteristics of the roadway; to reduce congestion and animal collisions, and to support economic development, enhanced planning coordination, and improved bicycle and pedestrian facilities.

CORRIDOR OPERATIONAL GOALS

- Improve safety throughout the corridor for all modes of travel
- Reduce congestion where needed
- Adequate roadway geometrics
- Apply context sensitive design
- Reduce wildlife collisions
- Support provision of adequate bike/pedestrian facilities
- Support economic development
- Enhanced planning coordination

1.4 EICLP PLAN RECOMMENDATIONS

Plan recommendations were developed to meet the corridor's established needs and goals in two general areas - policies and improvement projects. These two areas are inter-related since the successful and full implementation of many of the improvement projects is contingent upon, or enhanced by, the policy recommendations. The policy

recommendations also create a critical cooperative bond between ITD and the corridor communities and residents for Plan implementation and ongoing management.

1.4.1 Policy Recommendations

The following policy recommendations are designed to support the safe and efficient function of the roadways in the Eastern Idaho Corridor Loop. These policies are intended to compliment and enhance the integration of the Idaho Transportation Department's management of the corridor with local communities, counties, affected agencies and their associated land use and management policies.

ENVIRONMENTAL IMPACTS

- All improvements to state roadways within the Eastern Idaho Corridor Loop Plan will be planned and implemented with sensitivity to the natural and man made environment, with preference to solutions that minimize impacts to the environment.
- All improvements to the state roadways within the Eastern Idaho Corridor Loop will strive to decrease the impact of roadway operation on wildlife habitat and decrease collisions with wildlife.

DESIGN IMPROVEMENTS

- New improvements to the ITD roadways within the Eastern Idaho Corridor Loop will be done in a manner that is context sensitive to the function, aesthetics, safety, and mobility needs of the corridor communities, residents, and businesses.
- New improvements to ITD roadways within the Eastern Idaho Corridor Loop will appropriately accommodate the safe mobility needs of bicyclists and pedestrians. Plans for development of bike and pedestrian facilities will be developed with consideration given to existing local plans for bike and pedestrian improvements and in coordination with local communities and organizations to ensure that the most appropriate facility is developed to meet specific local and user needs.
- Improvements to state roadways within the Eastern Idaho Corridor Loop will be planned to improve safety, when the posted speeds are abided by.
- ITD will work closely with corridor communities and residents to routinely evaluate and set speed limits that are appropriate for safe roadway operation.

COORDINATION OF EFFORTS

- Planning for any new development and improvements to state roadways within the Eastern Idaho Corridor Loop will be done in a collaborative manner. The Idaho Transportation Department, all affected local governments (including the *Montana Department of Transportation* where appropriate*),* related agencies, interested user groups, affected property owners and business operators as necessary will be involved to ensure the most appropriate improvements are determined and implemented.
- The Idaho Transportation Department will strive for thorough and effective communication through reasonable efforts to inform local communities and corridor residents regarding planned repair, renovation, and major roadway maintenance activities that significantly impact roadway operation.
- The Idaho Transportation Department will work with local counties and communities (including local planning and zoning departments, and school districts) to establish and implement a collaborative planned development review process.

MULTIMODAL ROUTE/COORDINATION

- The Idaho Transportation Department will support the development of the proposed multi-modal trail (coordinated by Idaho Department of Parks and Recreation) in the southern part of the corridor connecting Arco, Mackay, and Challis.

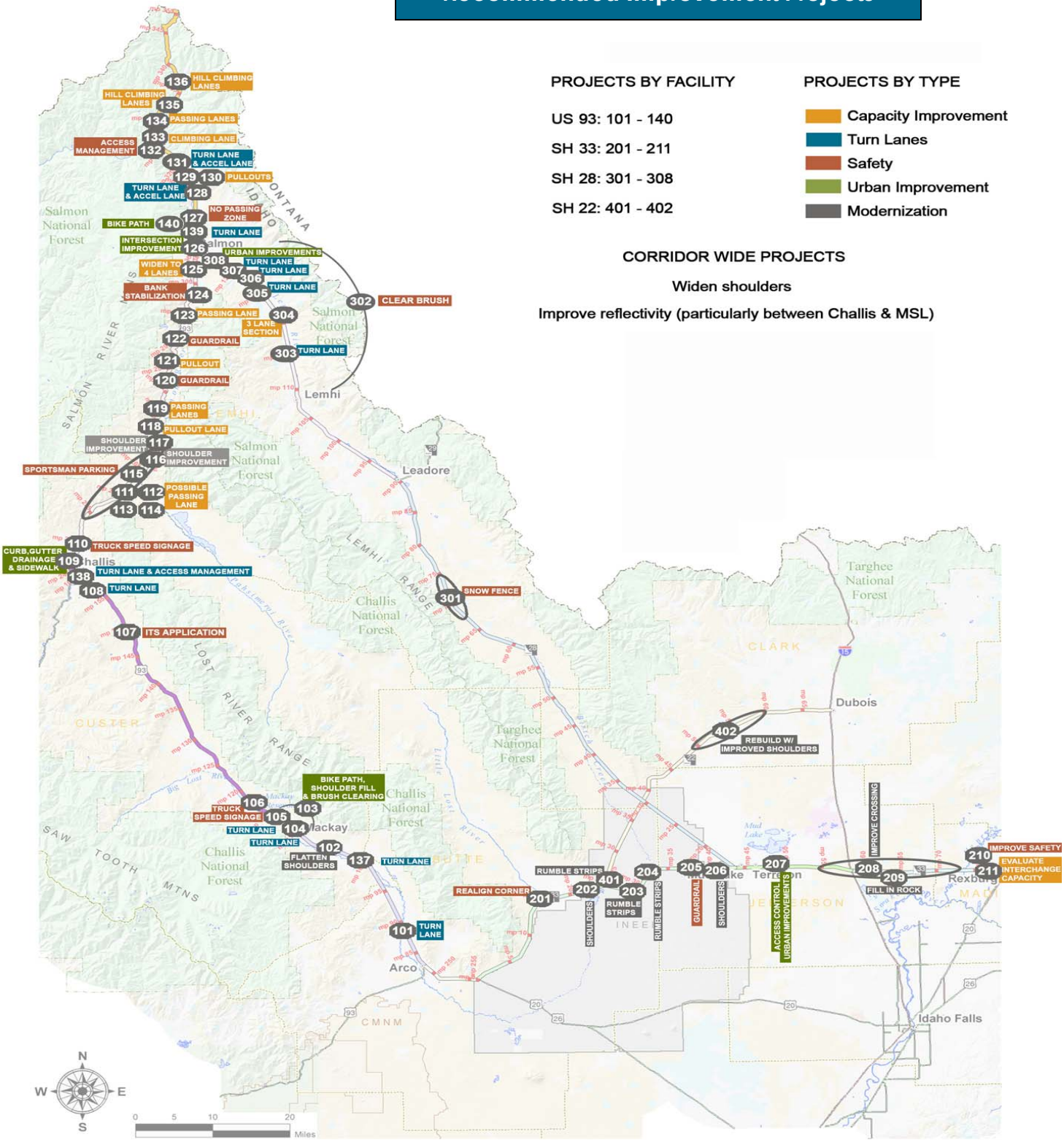
PUBLIC TRANSPORTATION

- ITD, through their Division of Public Transportation, will support local efforts to develop and provide appropriate public transportation services and support related roadway improvements such as pullouts and signage to meet the needs of senior citizens and other residents desiring these services.

1.4.2 Improvement Project Recommendations

Specific improvement project recommendations were developed based on identified issues, technical and operational needs of the corridor, along with evaluation according to the established needs and goals. The general categories for improvements included capacity improvements, left turns, safety, urban improvements, and modernization. The cumulative list of recommended improvement projects is shown on the "Project Recommendations" map on the next page, with a detailed description of each in the corridor plan document. These projects will now be considered for funding by ITD when the new Statewide Transportation Improvement Program is developed. If funded, projects will then be subject to further review and public comment during the project development phase.

East Idaho Corridor Loop Plan
Recommended Improvement Projects

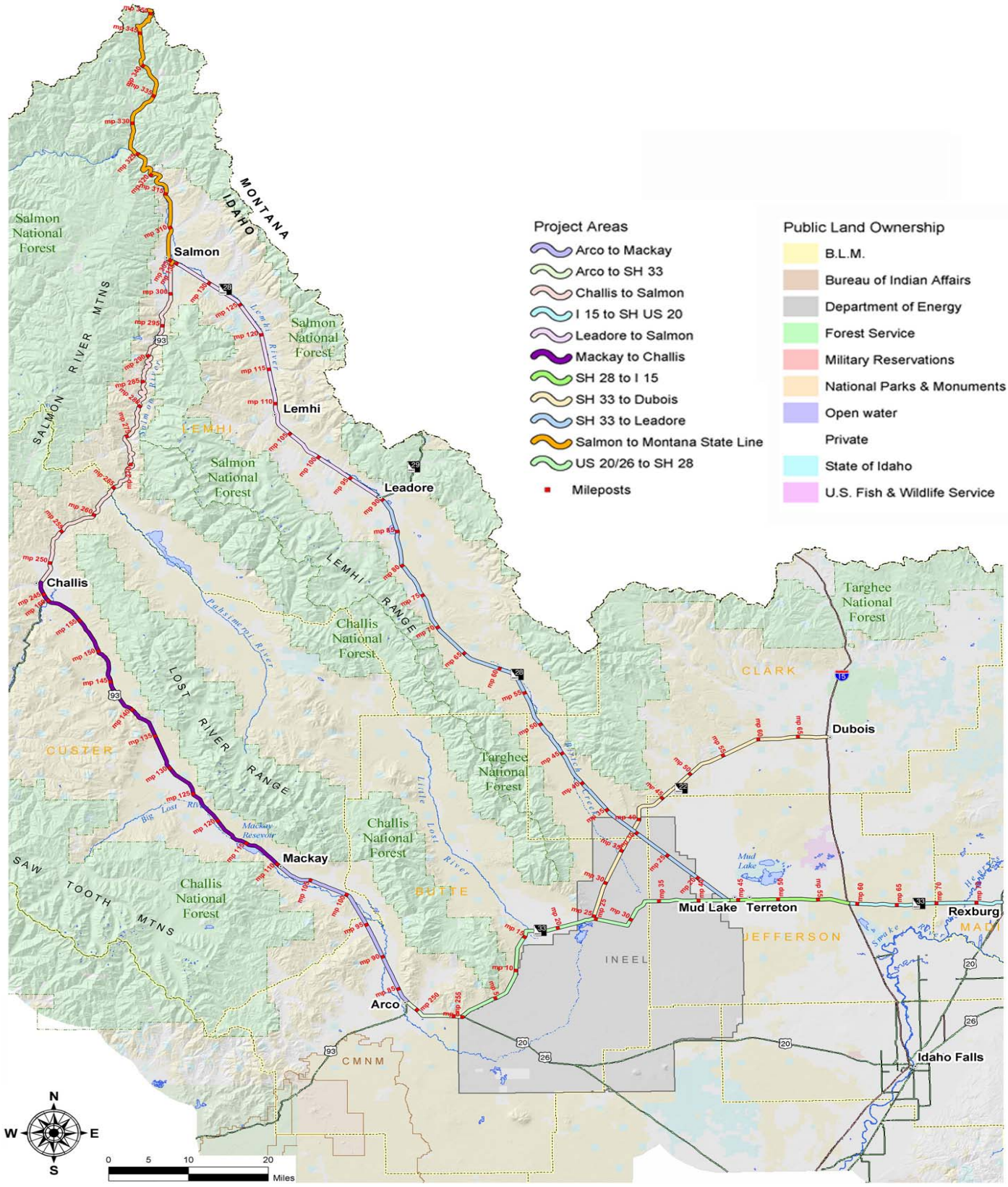


1.5 THE LOW-VOLUME CORRIDOR PLANNING PROCESS

Planning for low volume corridors has specific differences from the procedure used for those corridors with more typical traffic volumes. These differences are illustrated through a less intensive environmental process, a reduction in alternatives evaluation steps, and modified public involvement efforts. The public involvement plan for low volume corridors is also more streamlined, gathering input primarily at major decision points, supplemented with very specific activities targeted to meet the unique needs of the low volume corridor and its users. Specifically, the Public Involvement Plan (PIP) for the EICLP included only two rounds of general public open house events at key decision points; one at the beginning of the project to identify key issues and concerns and one near the conclusion of the process to present and gather comments on the draft plan recommendations. The corridor planning steps followed in the EICLP are shown in the table below.

East Idaho Corridor Loop Plan Corridor Planning Steps (Low-volume)
Step #1 **Identify Issues**
Step #2 **Research existing conditions of the transportation system**
Step #3 **Document existing and land use conditions**
Step #4 **Analyze future travel demand and performance**
Step #5 **Review corridor boundary / Develop purpose & need and goals**
Step #6 **Identify project areas and generate improvements to meet goals**
Step #7 **Project area environmental scan**
Step #8 **Identify feasible improvement projects and strategies**
Step #9 **Prepare draft project and policy recommendations**
Step #10 **Prepare final low-volume corridor plan**

East Idaho Corridor Loop Plan
Study Area



1.6 GENERAL CORRIDOR DESCRIPTION

The EICLP study area involves six counties, comprising 9.6 million acres (15,000 square miles) of diverse topography including lush forest, desert, lava beds, sagebrush plains, grasslands, and Borah Peak, the highest point in the state at 12,662 feet. With dense and rapidly growing urban areas, population density ranges from 0.6 persons per square mile to multi-story apartment complexes adjacent to a university. The economy for much of the area traditionally has been extractive, dependent on mining, logging, and agriculture, although high-tech and biotech industries, as well as higher education opportunities, are now available. Recreation is a universal component in the region and includes hunting and fishing, winter snow sports, wilderness backpacking and river-rafting opportunities.

The communities served by the EICLP include mostly small rural towns, primarily with populations of less than 3,500. The sole exception is Rexburg, located along SH 33 on the east edge of the corridor, which has a population of approximately 24,000. Rexburg is also the fastest growing community in the study area, with an anticipated population of over 33,000 by 2030 due primarily to the expansion of Brigham Young University–Idaho, in Rexburg.

In general, the transportation system in eastern Idaho serves an essential purpose in the daily lives of area residents and the traveling public visiting these communities and the region. The system connects home and work, schools, and shopping, while facilitating access to farms, ranches, and businesses. These routes also carry residents and travelers alike to the region's excellent natural attractions such as Craters of the Moon National Monument near Arco, the Salmon River, Land of the Yankee Fork near Challis, and cultural resources such as the new Sacajawea Center near Salmon.

1.7 CORRIDOR CONDITIONS

1.7.1 Roadway and Transportation System

The investigation of existing conditions on the East Idaho Corridor Loop transportation system identified a number of issues to be considered in the development of the corridor plan.

- Deficiencies in horizontal alignment exist over most of the roadways in the Loop. Although considered a minor defect on most roadways, US 93 has 68 locations where curvature is greater than recommended.
- There are only minor vertical alignment deficiencies along the Loop on SH 33 and US 93.
- Passing sight distance and passing opportunities are limited along US 93, in particular between Challis and Salmon.
- Shoulder width and condition are extremely poor in a significant portion of the corridor. Almost 23 percent of SH 33, 12 percent of SH 28, 56 percent of US 93, and 63 percent of SH 22 have shoulder width of one foot or less.
- Access control measures should be enhanced on eight different locations identified along SH 33, SH 28, and US 93.
- Pavement condition is poor in several locations along the corridor.
- There are only two bridges in poor condition, one on SH 28, and one on US 93.
- Truck traffic is expected to increase at a higher rate than general vehicle traffic.
- Even though crash rates are significantly lower than statewide non-interstate crash rates, the number of crashes in the Loop has constantly increased during the last six years.

- There is the need and desire for enhanced bike/pedestrian facilities at and around urban areas.
- Corridor volumes are so low that no level of service concern exists now or within the planning horizon by 2030, with the exception of US 93 in Salmon.

1.7.2 Traffic

The traffic volumes on the corridor are generally very low, with minor growth expected by the planning horizon of 2030. The two areas with the most significant concern for increased traffic volumes and congestion are on US 93 where it serves as Salmon's Main Street, and west of Rexburg on SH 33. Salmon's increase is expected due to increased community and regional population, and from travel into and through Salmon. The SH 33 increase is due to new residential development along the corridor, west of Rexburg, and the growing Rexburg population due to the expansion of the BYU-I campus in Rexburg. Seasonal traffic variations were also assessed which revealed that on almost every corridor, the traffic volumes in the summer months are double that of winter months. Regarding capacity, under existing traffic conditions, no section of the Loop was found to be near capacity. The segment with the highest volume to capacity ratio is located on US 93 along Salmon Main Street.

1.7.3 Crash History and Analysis

An assessment of the corridor accident history revealed that there were 862 crashes on the Loop during the six year analysis period. Fatal crashes accounted for approximately three percent of all crashes while injury crashes accounted for approximately 43 percent of all crashes. Crashes with property damage only (PDO) accounted for approximately 54 percent (466) of all crashes. The majority of accidents involved one vehicle and occurred on dry pavement. The most significant recommendations for roadway improvements derived from the crash history analysis incude widening shoulders, providing adequate clear zones, using rumble strips, and widening pavement markings.

1.7.4 Environmental Scan

The environmental scan (broken into five roadway segments), pursuant to the low volume corridor guidelines, was conducted for all anticipated project areas in the corridor. The scan was conducted in two steps. First, the feasible alternatives were evaluated for the existence of any environmental fatal flaws that could result in either serious impacts or the likelihood to cause the alternative to be dropped during project development. Second, each of the segments was evaluated for land ownership, geology and soils, water resources, wetlands, noise, hazardous materials, vegetation, wildlife, fisheries, historical resources, archaeological resources and traditional resources.

1.8 PUBLIC INVOLVEMENT

The public involvement activities followed the ITD guidelines for low-volume corridor plans. The primary public involvement activities are shown (shaded in gray) in the table below, as they were integrated into the overall planning steps (shown in white).

East Idaho Corridor Loop Plan Public Involvement Steps and Schedule	
Step #1 Identify Issues • Corridor Tour – review existing conditions and discuss future needs • Stakeholder interviews – introduce the project / identify issues • Meet with elected officials – introduce the project / identify issues	**June / Aug 2004**
Public Open House #1: Project Kick Off—Identify Issues	**July 04**
Step #2 Research existing conditions of the transportation system	**June / Aug 2004**
Partner Projects Workshops: Communications, presentations & project planning	**Sept 04**
Step #3 Document existing and land use conditions	**Sept / Oct 2004**
Step #4 Analyze future travel demand and performance	**Oct 2004**
Step #5 Review corridor boundary / Develop purpose & need /corridor goals	**Oct 2004**
Step #6 Identify project areas and generate improvements to meet goals	**Sept / Dec 2004**
Step #7 Project area environmental scan	**Oct/Dec 2004**
Agency Workshop – Preliminary environmental area scan / draft improvement projects	**Dec 2004**
Step #8 Identify feasible improvement projects and strategies	**Dec 04/Jan 05**
ITD Staff Work Session – Environmental area scan and improvement projects	**Jan 2005**
Regional Transportation Committee Presentations – Draft projects	**Feb 2005**
Step #9 Prepare draft project and policy recommendations	**Mar / Apr 05**
Public Open House #2: Present Draft Recommended Improvements	**May 2005**
Step #10 Prepare final low-volume corridor plan	**Spring 2006**

1.8.1 Public Involvement Elements

The public involvement program was anchored with a series of core elements. Twenty stakeholder interviews were held at the beginning of the process to introduce the process and identify initial issues and concerns. Two public open houses were held (each time at three locations on the corridor); one at project kick-off to introduce the project and identify issues, and a second near the end of the project to gather comments on the draft plan recommendations. Project Partner Workshops were held in both Salmon and Challis to identify specific project needs and possible improvements to address those needs.

An Agency Workshop was held at the draft improvement project stage to identify any significant issues and concerns as well as any fatal flaws that may cause projects to be dropped from further consideration. A workshop was also held with the Loop's regional transportation committees to discuss draft projects and gather comments. Finally, a half-day work session was held with ITD staff to discuss the draft projects and gather comments for revision prior to developing the Plan recommendations.

The public involvement program was augmented with a Plan web site, two newsletters, media notices and articles, comment forms, and the use of a Plan mailing list for distribution of Plan materials and notices of upcoming activities. The final draft report, which detailed corridor findings and suggested improvement alternatives, was distributed to local libraries in the area for the public to be afforded the opportunity to review and comment on the report. No comments were received regarding the final draft corridor plan document.

SECTION 2: INTRODUCTION

2.1 DEVELOPMENT OF PLAN

The Idaho Transportation Department has recognized the significance of the corridor to the eastern Idaho region and has committed to the effective planning of the area to meet the long-term needs of the public in the region, and to ensure that the continued efficiency of these routes is maintained. The Idaho Transportation Department commissioned this report to document the results of a study that addresses the role of the corridor in terms of economic vitality, the environment, right-of-way preservation, and the impacts of local land use on corridor operation and safety. The study also looks at all transportation modes, including public transportation, air, bicycle and pedestrian considerations, freight, and the needs of individuals in personal automobiles.

2.2 CORRIDOR PLANNING WITH ITD

The planning and review of the state roadways within the Eastern Idaho Corridor Loop has been done in a collaborative manner, which included the Idaho Transportation Department, all affected local governments, related agencies, interested user groups, affected property owners and those business operators determined necessary to ensure that the most appropriate improvements are established and implemented.

The Idaho Transportation Department is striving for thorough and effective communication with local communities and corridor residents regarding any planned repair, renovation, and major roadway maintenance activities that significantly affect roadway operation. This collaborative development review process between the State and local units of government will abide by the 3C planning process and be Comprehensive, Continuous, and Coordinated.

The Idaho Transportation Board began corridor planning as a practice in February 1998, with the adoption of ITD's Corridor Planning Guidebook. The intent is to develop plans for individual facilities that describe the impacts of the State Transportation Plan and the State Highway Plan (as well as other statewide modal plans) to determine the impacts and needs on an individual facility basis. The State Corridor Planning Guidebook includes key concepts for corridor plans to address:

- Assistance in prioritizing transportation projects and preserving public right of way.
- Comprehensively addressing the future transportation needs and developing management strategies in the corridor area.
- Tailoring of key elements based on Idaho Code, as well as ITD plans for the individual corridor.
- Fostering of cooperative State and local transportation planning efforts.
- Development of a clearly defined purpose and need statement to guide the planning effort.
- Promotion of active public participation throughout the planning effort on a local level.
- Consideration of all modes of transportation and their impacts within the limited geographic area served and sustained by the corridor.

2.3 CORRIDOR PLAN BACKGROUND

The transportation system in eastern Idaho serves an essential purpose in the daily lives of area residents and the traveling public visiting the region. The system connects home and work,

schools, and shopping, while facilitating access to farms, ranches, and businesses. These routes carry residents and travelers alike to the region's excellent natural attractions such as Craters of the Moon National Monument near Arco, the Salmon River, Land of the Yankee Fork near Challis, and cultural resources such as the new Sacagawea Center near Salmon.

With all the benefits of corridor planning, there tends to be confusion regarding the corridor planning process (an analysis and evaluation of project alternatives within the study area) and its role with project selection and development. The development of preferred alternatives for implementation is based on public involvement, district priorities, cost, and an environmental scan that all help to identify potential environmental problems or implementation difficulties that may be encountered on proposed projects as they proceed into the more formal project development process.

Confusion ensues when projects, identified as requiring National Environmental Policy Act (NEPA) documentation, proceed through to project development on a fast track basis following a recommendation in the corridor plan. This confusion tends to center on the public involvement portion of the plan, and whether alternatives could be eliminated based on public dissent during the corridor planning process. NEPA proponents stated that the Alternatives Analysis process conducted within NEPA is the only legitimate way to narrow the range of alternatives and to identify a Preferred Alternative for permitting and construction. Proponents of corridor planning argued that there were preferences identified in the planning process that were legitimate and should be considered in the project development process. These differing views led to the development of standards for the integration of NEPA and Corridor Planning practices, with an understanding of the appropriate level of coordination required, given the possible construction of projects forwarded through the corridor planning process.

2.3.1 Integration with NEPA

The following matrix summarizes a series of five approaches that aid in coordinating and integrating (to various degrees) Corridor Planning and NEPA. Each approach summarizes the relative advantages, disadvantages, and conditions under which the approach is most applicable. The lower the approach number, the higher the level of integration between corridor planning and NEPA. For example, Approach No. 1 is a fully integrated corridor plan, where NEPA is part and parcel of the work effort. At the other end of the range, Approach No. 5 is a pre-corridor planning/NEPA approach for projects that have not been designated as part of a corridor plan.

FIGURE 1: INTEGRATION OF NEPA AND CORRIDOR PLANNING

No.	Approach	Advantages	Disadvantages	Most Appropriate
1.	**Make corridor improvement decisions only within the formal NEPA process.** ***(With-NEPA Corridor Plan)*** ***EIS* – Environmental Impact Statement** ***DEIS* – Draft Environmental Impact Statement** ***EA* – Environmental Assessment**	Decisions are made under the NEPA umbrella. Likely to generate formal resource and local agency attention. Process is usually well understood, less chance of confusion. Elimination and selection of alternatives is most defensible when conducted in conjunction with the NEPA process. Can begin as an EA and transition to an EIS where the potential significance of impacts can be confirmed.	Requires Federal signatures, less local autonomy than if done outside of NEPA. Document has a 3-year shelf life. Developers must be prepared to keep moving. Potential corridor plan schedule delays because of environmentally significant issues. Multiple projects resulting from a planning study could require additional environmental documentation. Additional work developing consultant scopes of work is required by ITD Districts/FHWA Area Engineers.	When agencies expect projects will keep moving through project development and construction (i.e., document is unlikely to lapse). When significant streamlining of the planning and project development process is necessary.

No.	Approach	Advantages	Disadvantages	Most Appropriate
2.	**Conduct a tiered EIS*.** **Tier 1 conducted for alignment selection, design concept and scope decisions (or possibly corridor protection). From initial tiered EIS, subsequent environmental documents are prepared to address discrete projects within logical termini.** ***(With-NEPA Corridor Plan)*** *Note: No Idaho-specific experience in this type of environmental documentation.	Decisions are made under the NEPA Umbrella. Likely to generate formal resource and local agency attention. Federal signatures on Tier 1 reinforce design concept and scope decision. Amount of information in each tier can be tailored to needs.	Requires education of resource agencies and public as to objectives of plan. Could confuse public if not properly explained. Requires two drafts and a final EIS, including all necessary agency signatures. Potential corridor plan schedule delays because of environmentally or locally significant issues, reviews and approvals. Additional work developing consultant scopes of work is required by ITD Districts/FHWA Area Engineers.	Where Federal buyoff on design concept and scope helps cement decision. When it would help the lead agency focus on the issues that are ready for decision, while excluding those that are already decided or not yet matured. When significant time lag is expected between planning decision and project development. When corridor protection is an issue. When some streamlining of the planning and project development process is necessary.

No.	Approach	Advantages	Disadvantages	Most Appropriate
3.	**Prepare less detailed DEIS* for the design concept and scope decision, with expectations of a Supplemental DEIS or new DEIS for project development decisions.** **Also identified as the integrated planning and project development guidance approach.** ***(With-NEPA Corridor Plan)*** *Note: No Idaho-specific experience in this type of environmental documentation.	Approach is likely to generate formal resource and local agency attention. Provides flexibility on level of detail for DEIS, commensurate with what is required to make a decision on design concept and scope. Provides flexibility in whether to move ahead immediately into project development or wait. Less detailed EIS could lower costs and expedite schedules.	Resource agencies may expect more detail than DEIS is intended to provide. Some education of stakeholders may be needed. Supplemental DEIS may be necessary to provide additional environmental detail to achieve regulatory approval. Potential corridor plan schedule delays because of environmentally or locally significant issues. Additional work developing consultant scopes of work is required by ITD Districts/FHWA Area Engineers.	When agencies are not sure whether there will be a time lag between planning decision and project development. When Federal involvement in DEIS (but not necessarily buyoff) is viewed to be a positive aspect. When some streamlining of the planning and project development process is necessary.

No.	Approach	Advantages	Disadvantages	Most Appropriate
4.	**Initiate NEPA scoping process to begin the corridor plan, but do not prepare draft and final NEPA documents until later, when project development begins. Also described as the middle ground approach between the traditional NEPA process and making decisions outside of the NEPA process.** ***(With-NEPA Corridor Plan)***	Allows corridor plan to take the place within the umbrella of NEPA. Obligates resource agencies to become more involved in the process. Does not require Federal signatures until project development. Planning decisions made locally. Environmental scans could inform future project-level environmental documentation, especially for cumulative and secondary impacts.	Resource agencies may be unclear about their role and obligations under this approach. Responsibilities and expectations of all parties would need to be clearly understood and explained. May require preparation of Notice of Intent (NOI) and conduct of a scoping process, if Draft EIS is anticipated. Potential corridor plan schedule delays because of environmentally or locally significant issues. Additional work developing consultant scopes of work is required by ITD Districts/FHWA Area Engineers.	When there is a concern about making decisions outside the NEPA umbrella, but it is viewed to be premature to initiate NEPA documentation. When some streamlining of the planning and project development process is necessary.

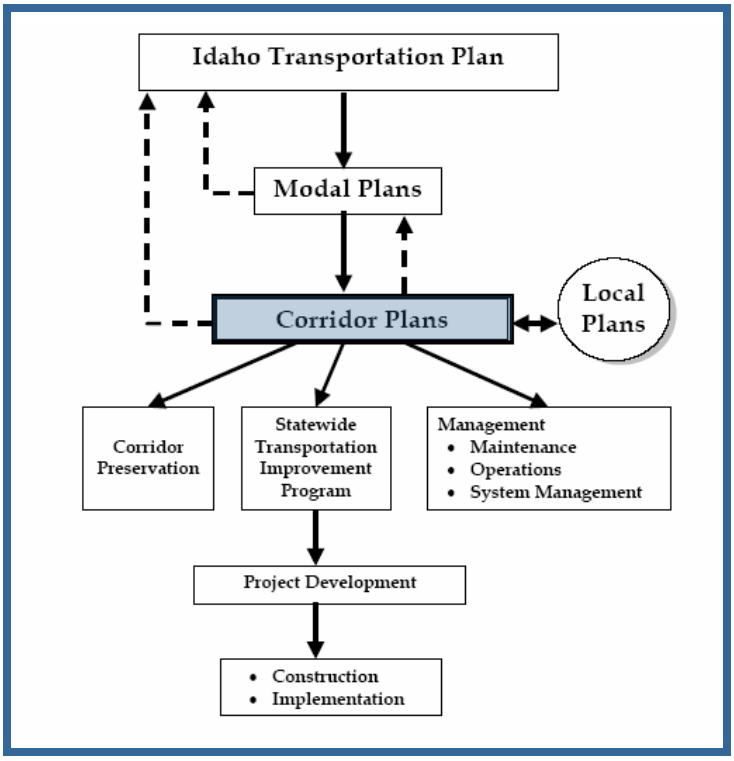
No.	Approach	Advantages	Disadvantages	Most Appropriate
5.	**Conduct corridor plan outside of formal NEPA process. Follow with NEPA documentation at appropriate time.** **Recognize planning documentation and associated decisions in the NOI and at scoping meeting.** **Confirm acceptability of analysis and conclusions there.** **Particular focus should be given to statements of problems, comparative data among alternatives, and descriptions of alternatives considered but eliminated.** ***(Pre-NEPA Corridor Plan)***	Provides greatest local flexibility. If study is conducted well, most information can usually be confirmed and incorporated into NEPA record. Have the option to initiate EIS/EA when appropriate, or "spin-off" projects to EIS/EA even in the middle of the planning process. Based on what is necessary to make a recommendation, environmental analysis should match detail appropriately.	Resource agencies may take study less seriously. Heightens possibility of revisiting decisions if study eliminates certain alternatives outside of NEPA umbrella. Public participation could decrease, as they are confronted with too many public meetings to attend.	When a multi-corridor plan is appropriate, with expectation of multiple recommended projects. When significant time lag is expected between planning decision and project development. When a more streamlined planning and project development process is not necessary.

Approach number 5 is being used with the EICLP to complete the corridor plan outside of the NEPA process. There are no earmarked funds (or a project outcome) expected to be a part of the final plan. If one or more of the project recommendations proceed relatively quickly into project development, the recommendations within the planning process are general, and the public has been informed that this is just the beginning of project development. Should additional work be done within the corridor, a much more comprehensive planning and environmental analysis would be conducted at that time. This would include a more comprehensive look at alternatives and, potentially the reanalysis and consideration of projects that did not have popular support.

2.3.2 Corridor Plan Documentation and its Uses

As stated previously, a corridor plan documents the implementation of the Idaho Transportation Plan and its modal plan elements on a specific facility. The flow chart below is provided in the Idaho Corridor Planning Guidebook and shows where corridor planning fits into the overall process at the State and local levels.

FIGURE 2: HOW CORRIDOR PLANNING FITS IN

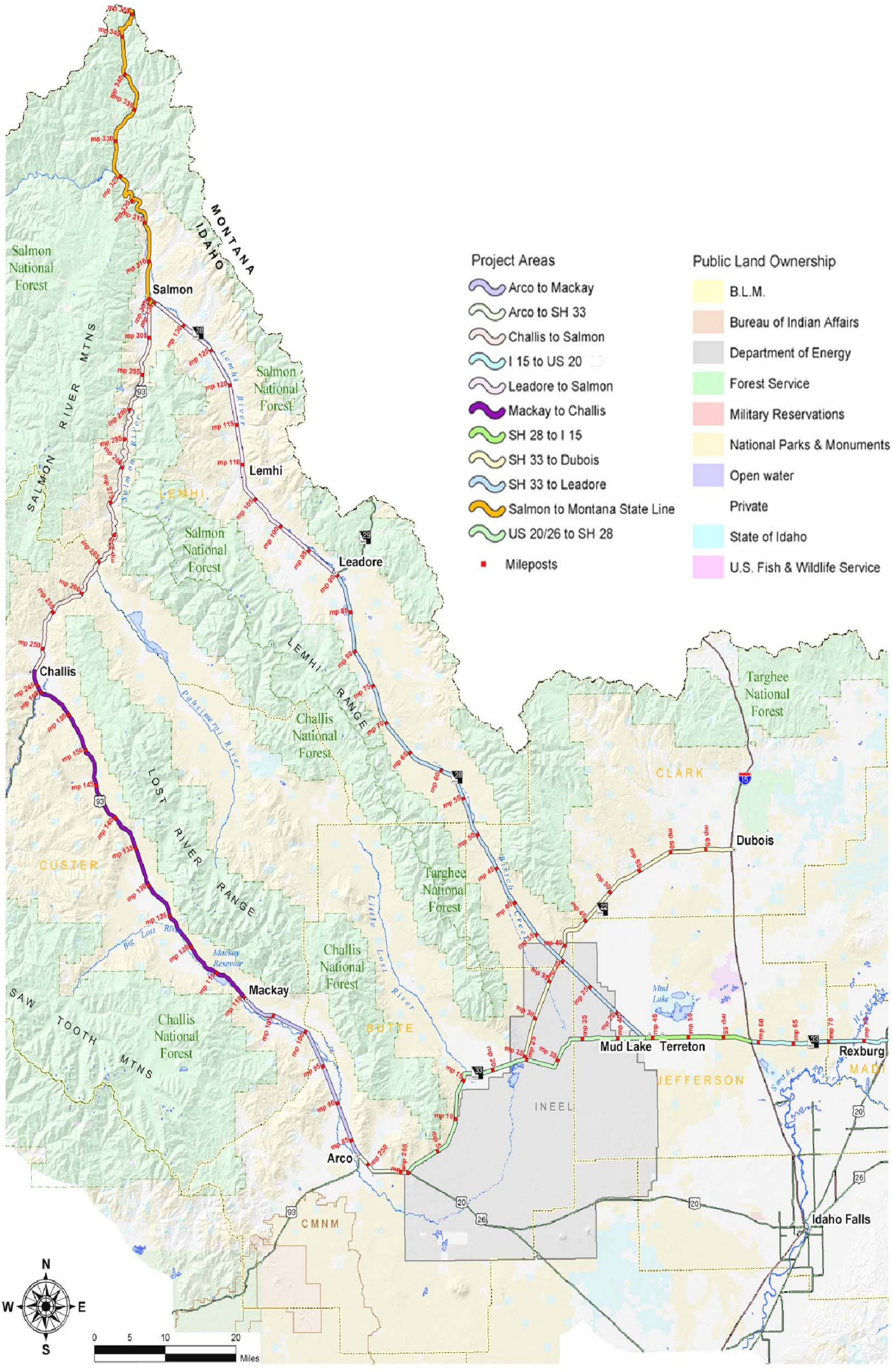


Corridor plans are adopted by the State Transportation Board as policy, thus the recommendations for projects that are borne of the planning process serve as the basis for improvements within the corridor boundaries. Should a project be suggested that is not included in the corridor plan, an evaluation of the project for plan consistency should be performed and a subsequent plan update or revision should be done to include the project.

2.4 CORRIDOR SEGMENTS FOR ANALYSIS

For the purposes of this study, the Loop was divided into five corridors to identify needed traffic and roadway improvements to sections of a series of federal and state highways known as US 93, SH 33, SH 28, SH 22 (between Rexburg and the Montana border at Lost Trail Pass north of Salmon) and a minor portion of US 20. The Loop is considered low-volume, with the roadways primarily constructed as two-lane facilities connecting six counties and traveling through land consisting generally of flat, rolling, and mountainous terrain.

MAP 1: STUDY AREA



Study Area			
Corridor	From milepost	To milepost	Segment
SH 33 Main Route	0.000	43.620	US 20/26 to SH 28
	43.620	58.838	SH 28 to I 15
	58.838	78.236	I 15 to US 20
SH 28 Main Route	15.150	90.636	SH 33 to Leadore
	90.636	135.645	Leadore to Salmon
US 93 Main Route	82.600	109.485	Arco to Mackay
	109.485	246.818	Mackay to Challis
	246.818	304.251	Challis to Salmon
	304.251	350.819	Salmon to the Montana State Line
US 93 Spur	0.000	0.321	Challis
US 93 SH 28 Connector	10.000	10.040	Salmon
SH 22	24.670	68.606	SH 33 to Dubois
US 20 Main Route	248.555	256.073	Arco to SH 33

2.5 PROJECT PURPOSE AND NEED

The purpose of the Eastern Idaho Corridor Loop Plan is to assess roadway conditions and growth patterns within the corridor study area and to develop recommendations for roadway management and upgrades to meet the needs of the corridor and residents for the next 20 years.

The needs of the area include:

- Safe design of corridor facilities with attention to:
  - Roadway and shoulder width
  - Horizontal and vertical curvature
  - Number and location of passing lanes
  - Warning and protection devices such as reflectors and guardrails
  - Intersection safety and capacity
- Safe access to new development adjacent to the corridor
- Year-round connectivity to local, regional, and statewide destinations.
- Adequate bike and pedestrian facilities to support local and regional use
- Adequate signage to support adjacent community needs
- Decreased vehicle / wild and domestic animal collisions
- Sufficient bridge condition and capacity to meet corridor and user needs

2.6 PROJECT GOALS

The goal of the Plan is to address the needs of the transportation routes by reviewing the existing traffic, land use, and environmental conditions to improve the safety and physical characteristics of the roadway; reduce congestion and animal collisions, and support economic development, enhanced planning coordination and improved bicycle and pedestrian facilities.

More specifically:

SAFETY: Improve safety throughout the corridor for all modes of travel

- Access management
- Improved clear zones
- Rumble strips
- Bike / pedestrian facilities
- Adequate passing lanes (where feasible)

REDUCE CONGESTION WHERE NEEDED

- Determine congestion levels and locations
- Investigate traffic patterns in and around Salmon
- Identify needed capacity improvements
- Investigate intersection capacities

ADEQUATE ROADWAY GEOMETRICS

- Apply Idaho Transportation Department (ITD) minimum design standards
- Establish and apply parameters for reflectivity and guard rail placement
- Determine minimum design speed for improvements at curves, passing areas, etc.
- Adjust horizontal and vertical curve design as needed

APPLY CONTEXT SENSITIVE DESIGN

- Identify areas to apply context sensitive design
- Utilize ITD context sensitive design guidelines
- Include bicycle and pedestrian facilities where needed

REDUCE WILDLIFE COLLISIONS

- Investigate areas of high wildlife collisions.
- Determine extent, description and location of areas with higher than average wildlife collision incidents
- Investigate appropriate treatments to reduce wild animal collisions

SUPPORT PROVISION OF ADEQUATE BIKE/PEDESTRIAN FACILITIES

- Determine the most appropriate type of facility to meet user needs; separated, shoulder, hard or soft surface, etc.
- Connect to local sites and attractions where feasible
- Plan bike and pedestrian facilities in conjunction with overall community or regional bike/pedestrian plans where appropriate
- Consider bike/pedestrian enhancements and facilities in project designs for corridor improvements

SUPPORT ECONOMIC DEVELOPMENT

- Pursue appropriate highway signage that supports community, tourism and

business needs

ENHANCED COORDINATION

- Implement activities that enhance planning, coordination and communication between ITD and local governments
- Regular ITD review of proposed major new developments to maintain corridor safety and effective operation

SECTION 3: EXISTING TRANSPORTATION SYSTEM

3.1 HIGHWAY GEOMETRICS

Highway geometrics play a major factor in the design and function of a roadway. The combination of a number of factors (as noted in the following sections) affects the usefulness, safety, speed uniformity, and appearance of a roadway.

3.1.1 Vertical Alignment

Vertical alignment measures the amount of elevation change in a particular roadway, important since the length and steepness of grades on a roadway directly affect the operational characteristics of the roadway. The American Association of State Highway and Transportation Officials (AASHTO) publication, *Geometric Design of Highways and Streets,* lists recommendations for the maximum vertical grade on rural arterials depending on the type of terrain in the area and the design speed of the roadway. For example, with a design speed of 65 mph, the maximum grade recommended on flat terrain is three percent, on rolling terrain four percent, and five percent on mountainous terrain. There are only minor vertical alignment deficiencies along the Loop, with some opportunities for improvement in certain sections along SH 33 and US 93. Analysis of the data collected on the various segments of the Loop indicated the following:

SH 33 There is only one segment along SH 33 where the vertical grade exceeds the recommended grade for the local terrain: milepost 4.031 to 4.125, where the vertical grade is 5.9 percent; almost fifty-percent more than the desired four percent grade.

SH 28 Even though nine segments along SH 28 exceed the recommended vertical grade, the actual vertical grade in all cases is only slightly above the recommended grade.

TABLE 1: VERTICAL GRADES – SH 28

Roadway Section (MP – MP)	Actual Vertical Grade	Recommended Maximum Vertical Grade	Terrain Type
51.501 -51.624	3.22	3	Flat
51.524 – 51.875	3.5	3	Flat
51.875 -52.169	3.17	3	Flat
52.831 – 53.291	3.26	3	Flat
54.749 – 55.047	3.69	3	Flat
69.886 – 70.199	3.75	3	Flat
70.284 – 70.625	3.34	3	Flat
72.140 – 72.348	3.03	3	Flat
78.347 – 78.640	4.12	4	Rolling

Source: *Highway Performance Monitoring System,* January 2003

US 93 There are 13 locations were vertical grades are higher than recommended. The locations where the differences between actual and recommended grades are higher are at milepost 116.7 at Mackay Reservoir, milepost 123.62, and milepost 248.9 north of Challis.

TABLE 2: VERTICAL GRADES – US 93

Roadway Section (MP – MP)	Actual Vertical Grade	Recommended Maximum Vertical Grade	Terrain Type
100.743 – 100.800	3.25	3	Flat
113.472 – 113.477	5	4	Rolling
115.693 – 115.774	4.83	4	Rolling
116.697 – 116.896	5.03	4	Rolling
117.151 – 117.246	4.46	4	Rolling
121.447 – 121.571	4.7	4	Rolling
123.314 – 123.418	5	4	Rolling
123.622 – 123.764	5.49	4	Rolling
123.764 – 123.960	4.59	4	Rolling
160.340 – 244.548	5.07	4	Rolling
248.901 – 249.061	5.08	4	Rolling
249.563 – 249.841	4.17	4	Rolling
288.983 – 289.153	5.98	5	Mountainous

Source: *Highway Performance Monitoring System*, January 2003

SH 22 One segment along SH 22 exceeds the recommended vertical grade for the local flat terrain, located between mileposts 42.408 to 42.607, where the vertical grade is 3.14 percent.

US 20 There are no segments along US 20 within the study area where the vertical grade exceeds the recommended grade for the local terrain.

3.1.2 Horizontal Alignment

The primary element of horizontal alignment is horizontal curvature which measures the degree of turns and bends in the road. The degree of curvature, or minimum curve radius, is the main physical control affecting a vehicle rounding a horizontal curve. The maximum allowable degree of curvature on a highway is directly related to design speed and is dependent on side friction and superelevation of the roadway. The AASHTO manual recommends that for a design speed of 65 mph, the degree of curvature should be no more than 3.45 – 4.26, depending on side friction and superelevation of the curve. Deficiencies in horizontal alignment exist over most of the corridors in the Loop.

Curves within the US 93 corridor

SH 33 (MP 0.000 to 78.236) Review of Horizontal curvature data collected by ITD along SH 33 consisted of all curves with a degree of curvature exceeding 3.45. According to the data, extremely sharp turns and curves are concentrated along the first five miles from the junction with US 20/26. Direct observation completed while driving the corridor identified curvature alignment deficiencies between mileposts 1 and 2, at mileposts 6.6, 9.3, and 13.2, a ninety-degree turn at Howe (milepost 15.9), and finally at mileposts 77.2 and 77.5 approaching Rexburg. This area of sharp curves west of Rexburg was frequently mentioned at the open house meetings as a safety concern. In addition, the crash analysis shows that between 1998 and 2003, almost 40 crashes (including one fatal crash) occurred between mileposts 77 and 78.

SH 28 (MP 47.791 to 47.990) There is essentially only one location where road curvature exceeds the recommended design. This location is an "S" shape alignment in which safety concerns arose not so much from the fact that the curves are slightly sharper than recommended but from the fact of being contiguous.

US 93 (MP 82.600 to 350.819) Along US 93, there are 68 locations where curvature is greater than the recommended degree of 3.45. The locations where the differences between actual and recommended grades are more pronounced are located between mileposts 286 and 290, and between mileposts 318 and 325 (where two fatal crashes occurred in the last five years). Field observations also showed sharp curves between mileposts 280 and 285 (where three fatal crashes occurred in the last two years).

SH 22 (MP 24.670 to 68.606) There are two segments along SH 22 where the horizontal curvatures exceed 3.45 degrees. The first is between mileposts 24.69 and 24.77 near the junction with SH 33, where a six-degree curve is far above the recommended curvature. The second location is between milepost 41.45 and 41.74. Even though the data shows a four-degree curvature, field observations indicate that the curvature degree might be higher.

US 20 (MP 248.555 to 256.073) According to state data, there are two segments (mileposts 250.99 to 251.17 and mileposts 253.979 to 254.136) along US 20 where the horizontal curvature exceeds the recommended maximum for the local terrain. Nonetheless, after driving the corridor a third sharp curve could be observed between milepost 251.5 and 251.8.

3.1.3 Passing Opportunities

The provision for adequate passing sight-distance on two-lane highways affects the capacity of the roadway. In order to permit passing on a two-lane highway, drivers must be able to see a sufficient distance down the road to evaluate oncoming vehicle traffic and execute a safe passing maneuver. The minimum AASHTO recommended passing sight distance on any roadway is directly related to the design speed on that roadway.

A distinction should be made between passing lanes and climbing lanes. Although the purpose of each is to reduce the platooning of traffic behind slower moving vehicles, the design principles employed are inherently different from one another. The design objectives used in the construction of a climbing lane are different because there is a desire to *eliminate* platooning due to a significant change in grade while a passing lane is to *disperse* platoons and improve traffic operations through enhanced passing opportunities along a roadway corridor.

3.1.4 Widening Feasibility

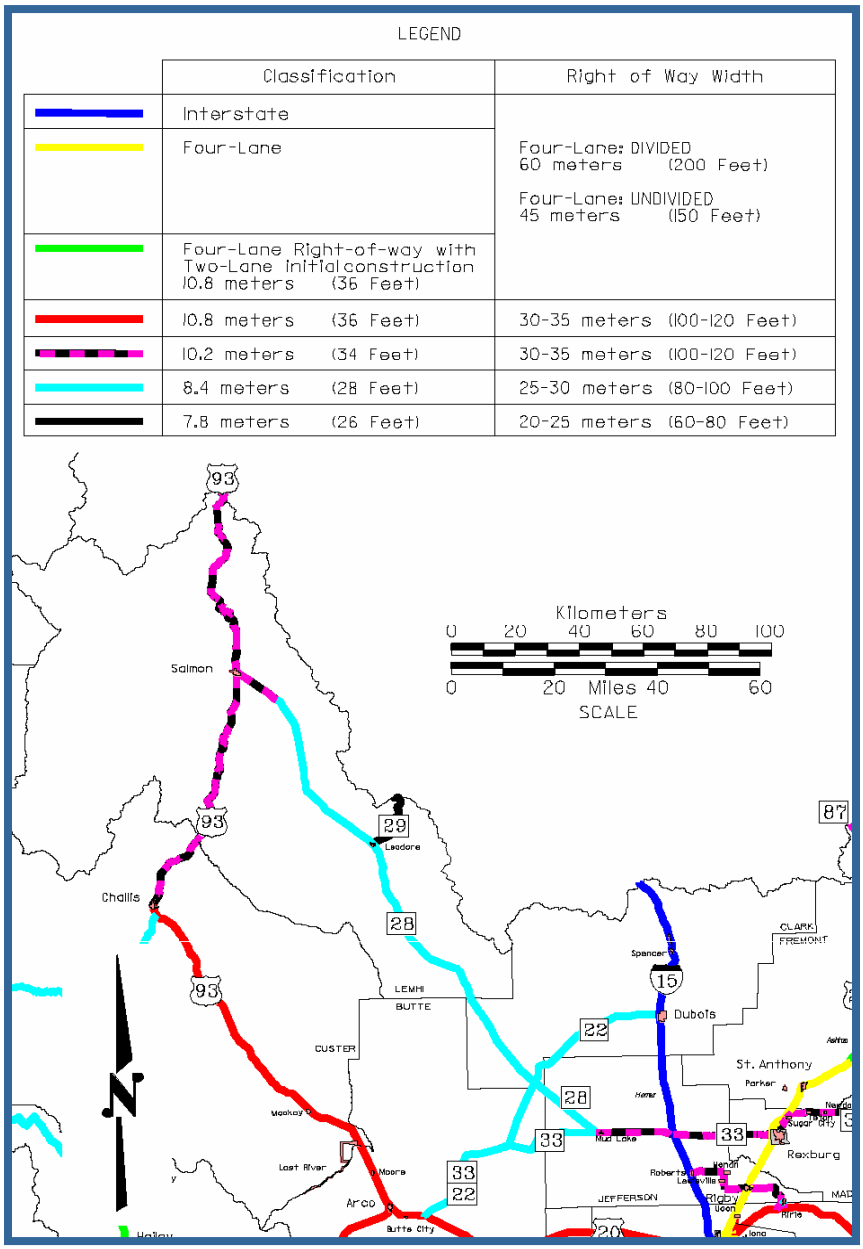
ITD provides information on widening feasibility on all state highways in Idaho, which is used to identify locations where passing lanes might be added in the future. Widening feasibility projections are based on existing physical features

and land uses along the roadway, such as housing, businesses, terrain, cemeteries, and areas where widening would be prohibitive by cost or environmental concerns. Estimates of widening feasibility are not limited by current right-of-way widths, state widening practices, policies, or projected traffic.

3.1.5 Right-of-Way

The *Idaho State Highway Plan* includes recommended roadway and right-of-way widths for rural highways in the state. During reconstruction projects, ITD's goal is to construct the roadway to the recommended roadway width, which is based on AASHTO design standards, but modifications may be made where required due to physical constraints.

FIGURE 3: RECOMMENDED ROADWAY AND R.O.W. WIDTHS



Existing right-of-way widths in the Loop are, for the most part, within the recommended right-of-way standards for rural highways. On SH 33, six portions of the roadway ranging in width from 80 to 90 feet are below the recommended right-of-way amount of 100 to 120-feet. US 93 has five deficient portions while US 20 has only one (Table 3).

TABLE 3: EXISTING RIGHT-OF-WAY

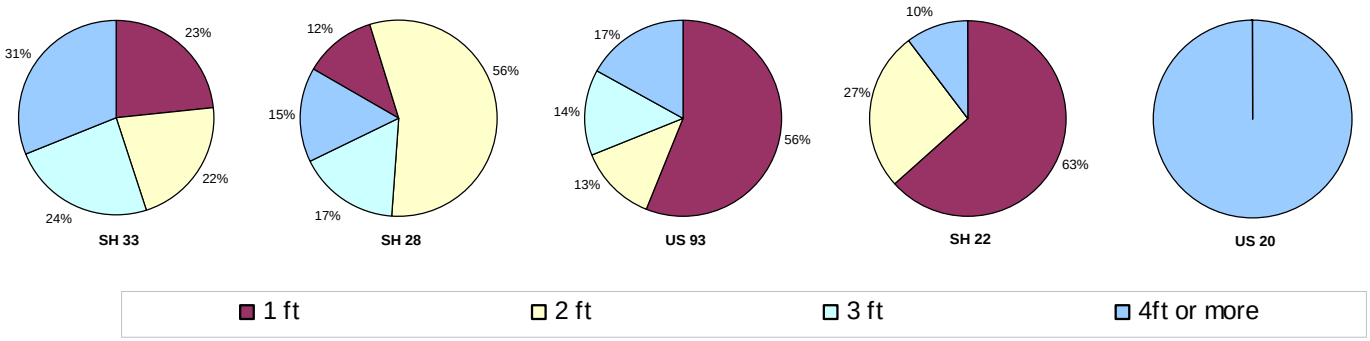
Roadway Section (MP – MP)	Right-of-Way (feet)	Recommended ROW
SH 33		
44.73 – 46.40	90	100 – 120
46.40 – 59.00	88	100 – 120
68.55 – 72.55	80	100 – 120
72.78 – 73.28	80	100 – 120
73.28 – 73.39	80	100 – 120
73.53 – 78.23	80	100 – 120
US 93		
249.41 – 252.22	80	100 – 120
255.02 – 258.38	80	100 – 120
285.46 – 290.44	80	100 – 120
292.80 – 298.98	80	100 – 120
302.27 – 303.75	80	100 – 120
US 20		
248.55 – 248.66	80	100 – 120

Source: *Highway Performance Monitoring System*, January 2003

3.1.6 Lane/Shoulder Width

The entire study area has twelve-foot wide travel lanes (the AASHTO recommended lane width for rural highways) except for a five-mile segment of US 93 where lanes are only eleven-feet wide. Ideally, a highway shoulder is wide enough to allow a stopped vehicle to be clear of the travel lanes by one to two-feet. AASHTO's recommended width of usable shoulder for design traffic volumes of over 2000 vehicles is eight-feet. On low-volume highways in difficult terrain, AASHTO's recommendation may not be feasible, but a minimum shoulder width of four-feet should be available. In instances of low traffic volumes or narrow roadway sections which are necessary to reduce construction impacts, the paved shoulder may be reduced to two-feet. Wider shoulders (six to eight-feet) are needed where bicycle travel is common. A lack in continuity, particularly where the right shoulder has been poorly maintained and the edge of the shoulder has been allowed to crumble, can be difficult for a cyclist or a vehicle to pull out of the traveled roadway.

FIGURE 4: SUMMARY OF EXISTING SHOULDER WIDTH (2002)

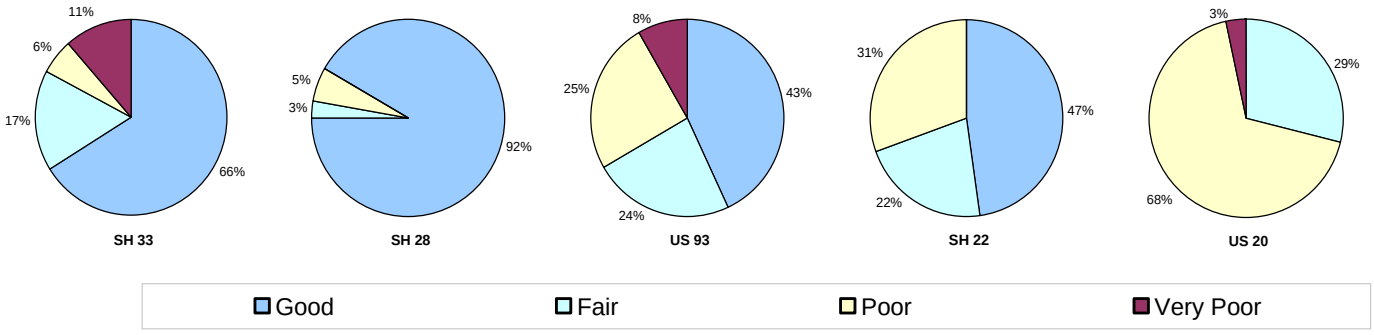


3.2 STRUCTURAL CONDITIONS

3.2.1 Pavement condition

Pavement Condition is determined by roadway functional classification in two categories - interstates and arterials/collectors. The condition of pavement is classified by ITD as Good, Fair, Poor, or Very Poor based on an assigned Roughness Index (RI) and Cracking Index (CI). The Roughness Index quantifies the longitudinal profile of the road surface based on the public perception of road roughness, which ranges from 0.0 (extremely rough) to 5.0 (perfectly smooth). Pavement distress, or cracking, is calculated for each pavement section based on the type, extent, and severity of cracking. A CI rating of 5.0 corresponds to a pavement section with little or no cracking while a rating of 0.0 represents a section with severe cracking. ITD annually obtains statewide longitudinal profiles and pavement cracking characteristics of all pavement-management sections. The reduction of pavement deficiencies on the State Highway System is accomplished through maintenance, rehabilitation, and reconstruction as appropriate during the life of a pavement.

FIGURE 5: SUMMARY OF EXISTING PAVEMENT CONDITIONS (2002)



3.2.2 Drainage

Drainage facilities (bridges, culverts, channels, curbs, gutters) carry water across the right-of-way and remove storm water from the roadway itself. The design and location of drainage facilities must be considered to minimize damage to upstream and downstream property and ensure a low degree of traffic interruption caused by flooding. Two areas of concern were identified during meetings with the public and ITD maintenance crews:

- The US 93 intersection with Challis Main Street due to snow melt and rain run off coming from the south.
- The US 93 intersection with US 20 at Arco main street.

3.2.3 Bridge Conditions

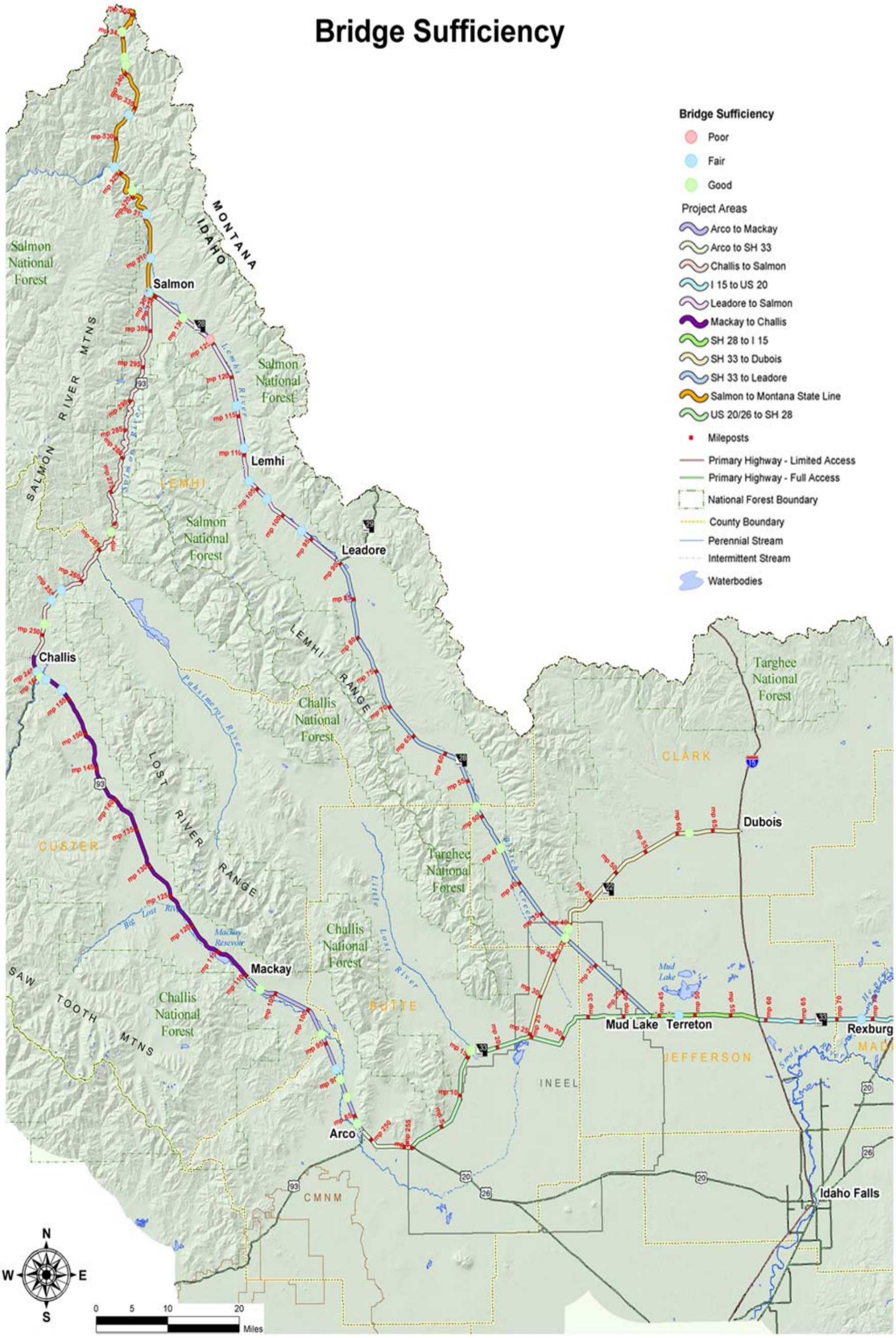
In Idaho, bridges are assigned a sufficiency rating ranging from zero to one-hundred that is used to determine bridge replacement and rehabilitation needs in the state. Bridge sufficiency ratings are based on a bridge's structural adequacy, compliance with current design standards, importance for public use, and eligibility for federal bridge replacement funds. Bridge sufficiency ratings below 50 indicate that the bridge needs to be replaced. Ratings between 50 and 80 imply that the bridge is in fair condition, and that rehabilitation, if cost effective, will bring the bridge up to current standards. Bridges with ratings above 80 are in good or adequate condition and are not eligible for federal funding. Current information on bridge projects on state routes shows the following projects along the East Idaho Corridor Loop:

TABLE 4: BRIDGE PROJECTS ON THE EICL

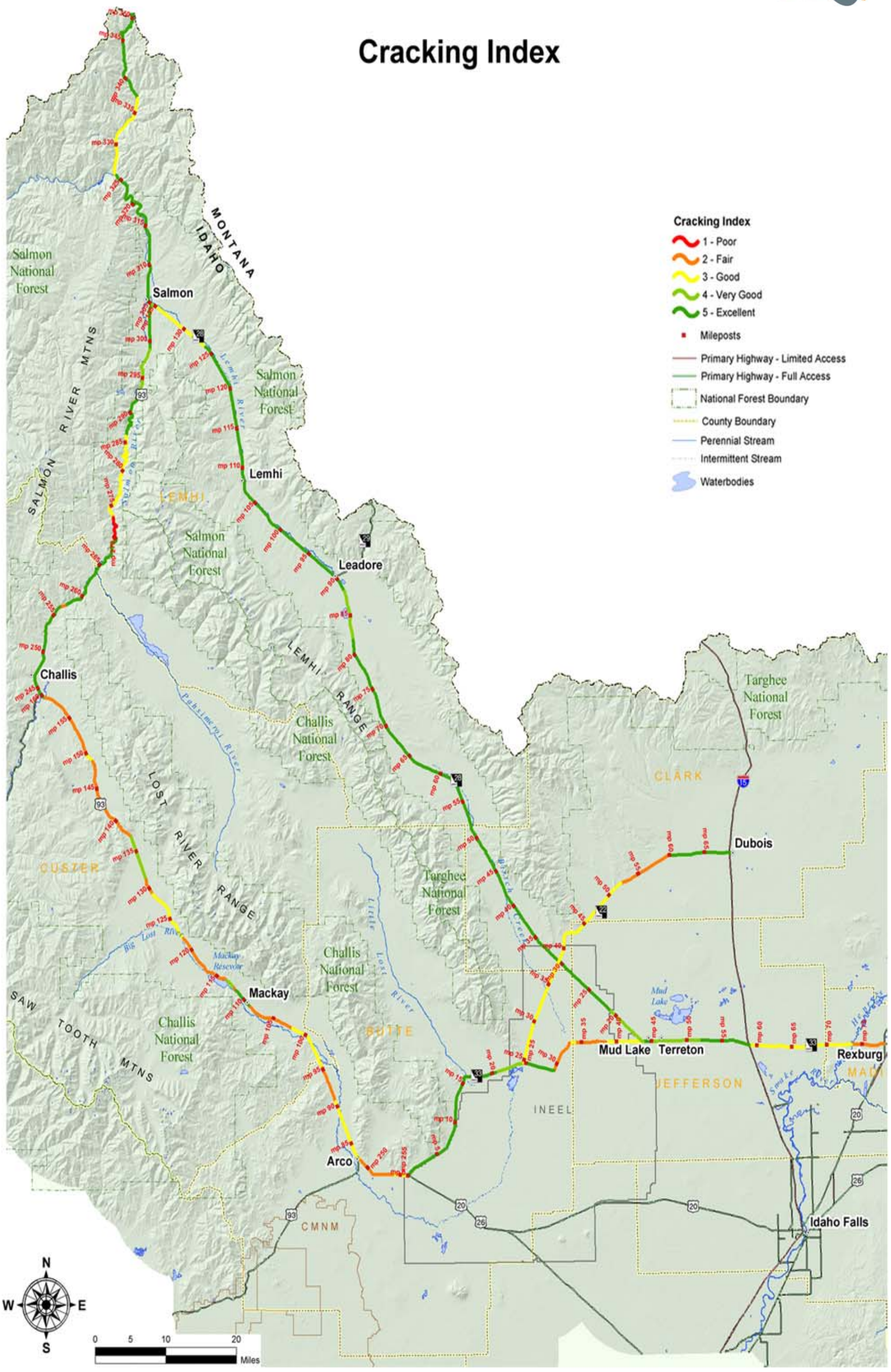
Route	Bridge's Milepost	Project	Year
SH 33	73.44	Henry's Fork Snake River Br; Approach Slab Repair (complete)	2004
US 93	256.80	Watts Bridge, Salmon River; Replacement	2007
US 93	305.24	Salmon River Br; Approach Enhance, Deck Repair	2006
US 93	309.03	Carmen; Deck Rehab.	2009

Source: ITD, Office of Bridge Design, September 2004

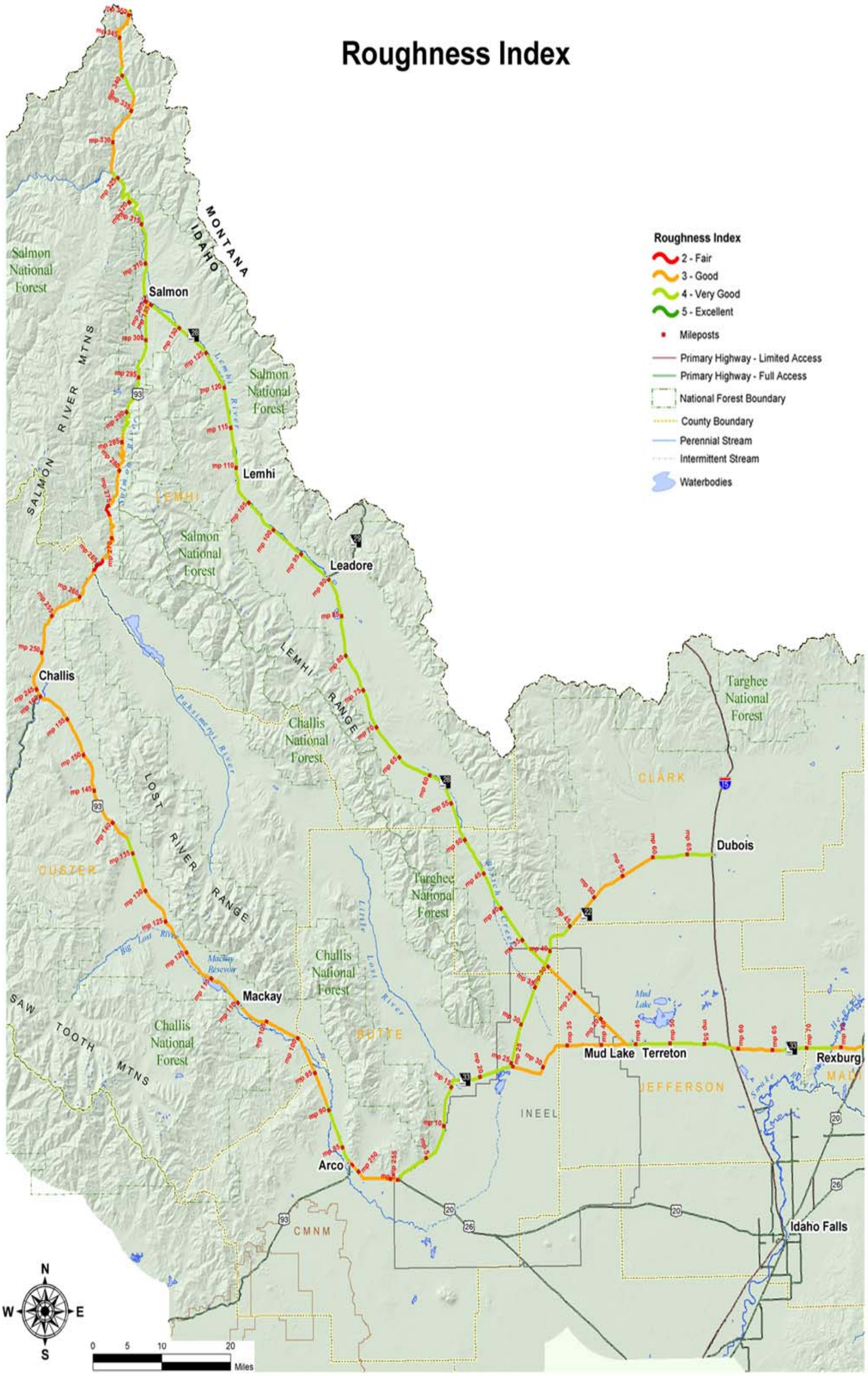
Bridge Sufficiency



Cracking Index



Roughness Index



3.3 TRAFFIC CONDITIONS

3.3.1 Average Daily Traffic Volumes

The ITD Transportation Planning division is charged with estimating the current and future Average Annual Daily Traffic volumes (AADT) on the highways included in the study area, which are based on actual traffic counts updated periodically. Six traffic counters located along the Loop were used to estimate past growth rates and measure the highest average growth rates during the past ten years.

TABLE 5: PAST AVERAGE ANNUAL GROWTH RATES (1994-2003)

Location	1994 AADT	2003 AADT	Growth Rate
SH 22 3.6 Mi. NE of Jefferson/Clark Co, Lidys	171*	199	1.70%
SH 28 0.1 Mile Southeast of Leadore	502	554	0.99%
US 93 2.9 Mi. S. of Salmon	2656	2694	0.14%
US 93 1.9 Mi. S. of Dickey	534	553	0.35%
US 20 4.6 Mi. E. of Jct US-93 (Arco)	2037	2134	0.47%
SH-33 6.6 Mi. E. of Howe	466	558	1.82%

Source: Automatic Traffic Counters # 77, #58, #13, #55, #17, and #56
* 1994 figures are estimates since this counter started collecting data on 1995

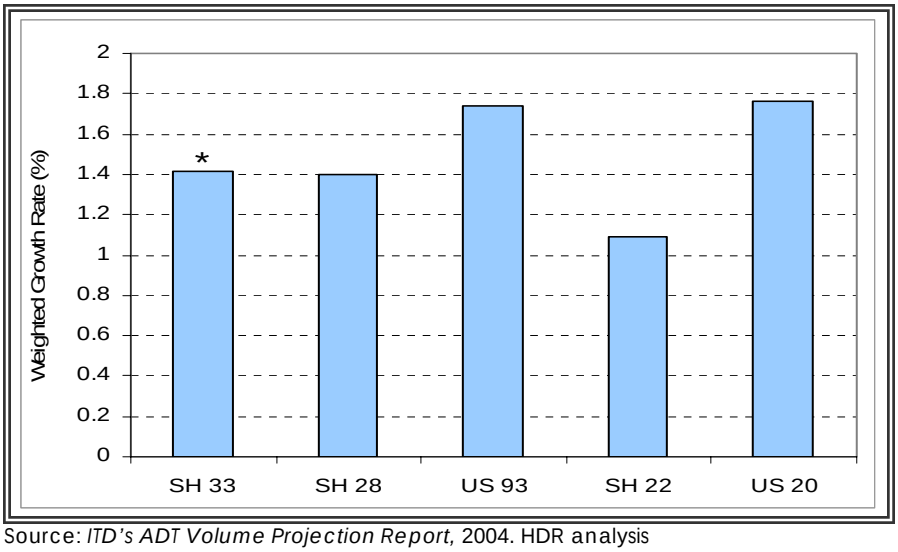
Table 6 shows the future ADTs and average growth rates for those locations in the Loop where current ADT is significantly higher compared to the corridor average. The segments of SH 33 west of Rexburg and US 93 through Salmon are expected to accommodate the higher number vehicles in 2030: 10,430 and 12,400 respectively.

TABLE 6: FUTURE AVERAGE ANNUAL GROWTH RATES (2003-2030)

Location	2003 AADT	2030 AADT	Growth Rate (%)
SH 33			
44.219 – 46.735	2640	3770	1.33
58.787 – 58.911	3200	4640	1.39
75.795 – 76.804	2900	4150	1.34
76.804 – 77.858	4600	6550	1.32
77.858 – 78.236	7260	10430	1.35
SH 28			
15.150 – 17.700	1200	1700	1.30
120.426 – 126.336	1100	1580	1.35
126.336 – 128.822	1300	1860	1.34
128.822 – 135.117	2900	4160	1.35
135.117 – 135.645	4200	5970	1.31
US 93			
246.444 – 246.598	3600	5610	1.66
303.485 – 304.262	4100	6400	1.66
304.262 – 304.675	4800	7480	1.66
304.675 – 305.340	8000	12400	1.64
305.340 – 306.304	3200	5000	1.67
SH 22			
24.670 – 62.579	230	310	1.11
62.579 – 68.460	480	620	0.95
68.460 – 68.606	750	970	0.96
US 20			
248.555 – 248.855	3300	5180	1.68
248.855 – 249.828	2500	3950	1.71
249.828 – 256.073	2100	3380	1.78

Source: *ITD's ADT Volume Projection Report,* 2004. HDR analysis

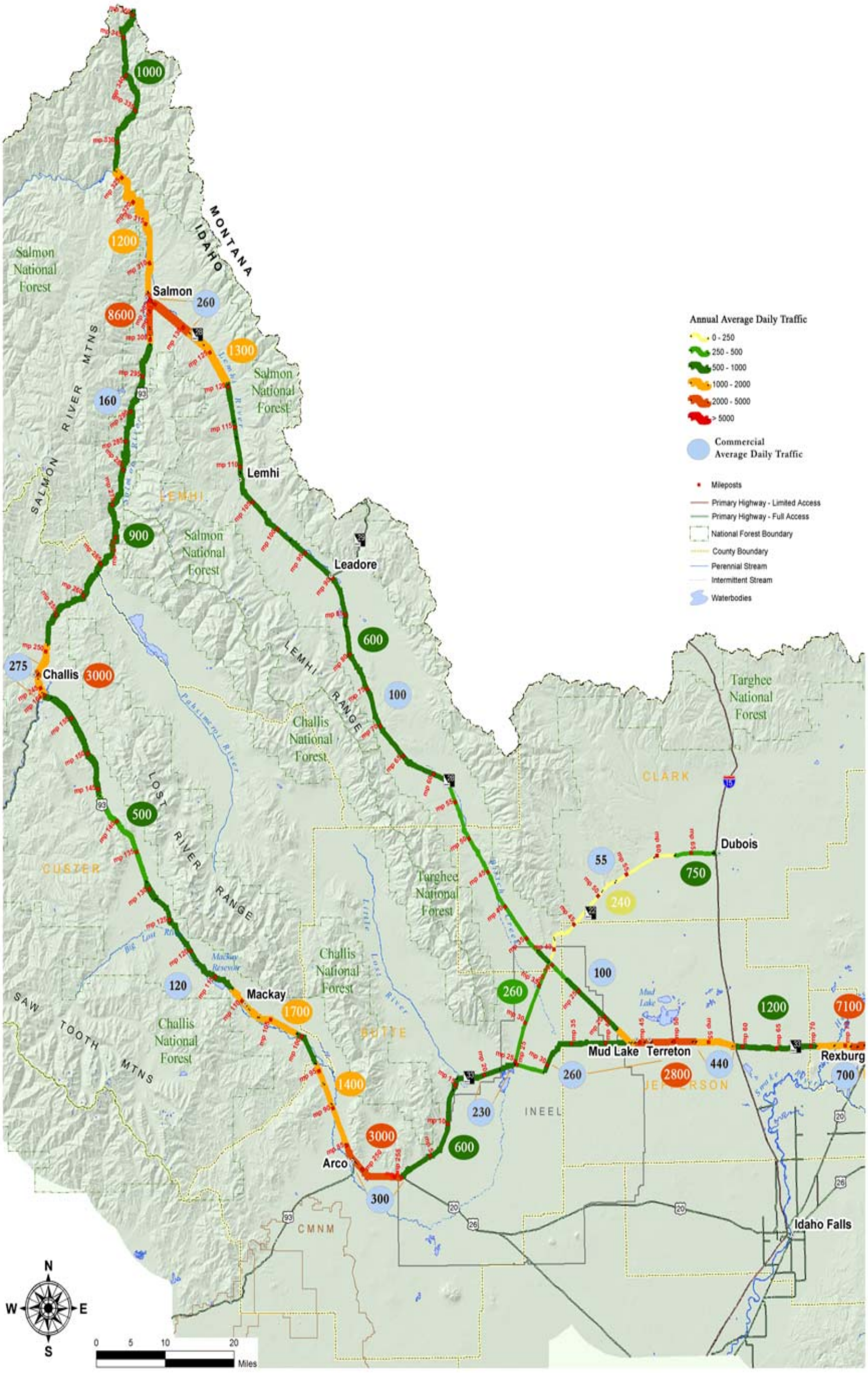
FIGURE 6: FUTURE AVERAGE ANNUAL GROWTH RATES BY CORRIDOR (2003-2030)



Source: *ITD's ADT Volume Projection Report,* 2004. HDR analysis

* Future ADT along SH 33, particularly near Rexburg, might be underestimated. Population and employment forecasts for the Rexburg area show an annual growth rate of around 2.2 percent (for detailed information please see the Demographics section).

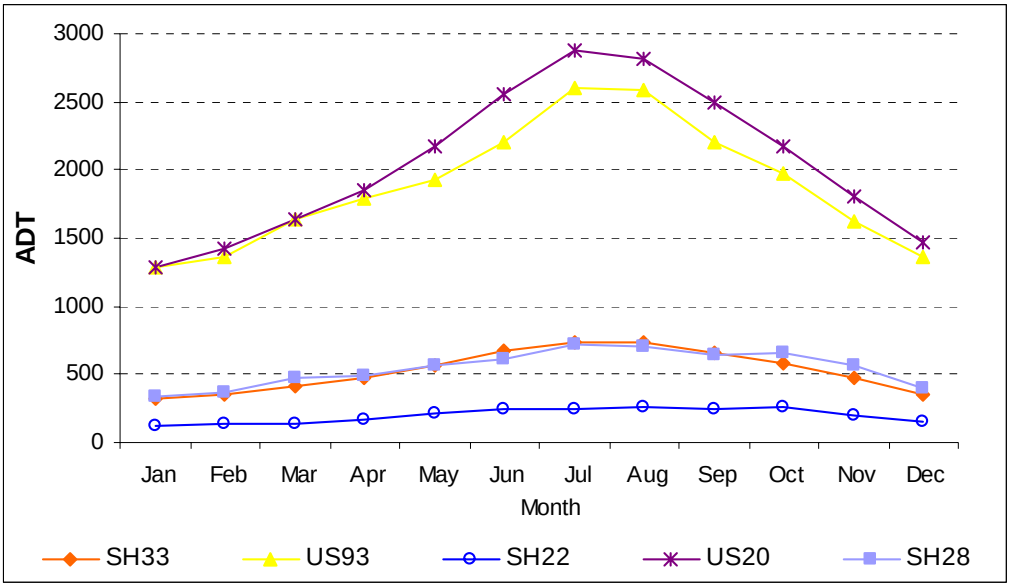
MAP 5: AVERAGE ANNUAL DAILY TRAFFIC VOLUMES (2002)



3.3.2 Seasonal Traffic Variations

Analysis of historic traffic volume data (1994-2003) from the permanent count stations within the study area reveals that there are seasonal trends in average daily traffic volumes. Based on the count data, traffic volumes reach annual highs in July and August, and lows in December and January. In almost every corridor, the traffic volumes in the summer months are double that of winter months.

FIGURE 7: ADT VARIATION



3.3.3 Capacity and Level of Service

ITD uses both level of service (LOS) which measures operational conditions and the volume/capacity (V/C) ratio as measurements of roadway congestion. Vehicle capacity is a measure of the maximum number of vehicles that can pass over a given section of roadway during a certain period under prevailing roadway and traffic conditions. V/C ratios range from zero (no congestion) to 1.00 (severe congestion). An increase in V/C results in a decrease in level of service, and a ratio representing at or near capacity levels of congestion correlates to a level of service D, which is the minimum acceptable level of service for roadways in Idaho (*Idaho State Highway Plan* V/C criteria). Under existing traffic conditions, no section of the Corridor Loop was found to be near capacity. The segment with the highest V/C ratio is located on US 93 along Salmon Main Street. (A capacity analysis was done as a part of the City of Salmon Transportation Plan adopted in early 2005.)

TABLE 7: STATE HIGHWAY PLAN VOLUME/CAPACITY STANDARDS

	Near Capacity V/C		At Capacity V/C	
	Urban	Rural	Urban	Rural
Interstate	0.66	0.75	0.83	0.92
Two Lane Highway	0.60	0.39	1.00	0.62
Three or More Lane Highway	0.79	0.75	1.00	0.89

Source: *Idaho State Highway Plan,* December 1997

3.3.4 Crash History and Analysis

A fundamental transportation investment is the enhancement of the quality of life by making it possible for people to move about the state in relative safety. While it will never be possible to

remove all risk involved in moving people or goods, it is a vitally important public policy objective to identify particularly high-risk circumstances and address them as comprehensibly as possible.

Improving highway safety requires consideration of the three elements influencing traffic operations: the driver, the vehicle, and the roadway. Although traffic engineers have effective control over only one of these elements - the roadway, planning policies could be implemented to address better information outreach and behavior. Traffic safety can be approached in a number of different ways: reducing crash occurrences, reducing the severity of crash, improving crash survivability, enforcing safety control efforts and improving design aspects of the road. Both physical alterations and social policies should be considered to enhance safety in the corridor. ITD maintains annual crash rate information for different types of roadways throughout the state. The crash rate calculation takes into account the characteristics of the roadway, including number of travel lanes, access control, type of median, roadway width, and average daily traffic (ADT) volumes. This information is contained in the *Safety Evaluation Instruction Manual.*

This analysis includes six years (1998-2003) of crash data obtained from the Idaho Transportation Department's (ITD's) Office of Highway Safety for the segments comprising the East Idaho Corridor Loop Plan. The data herein reflects the crashes where accident reports were completed and do not include or purport to estimate unreported crashes that may have occurred during the analysis period

The ITD crash database provides a variety of information about each reported crash including:

- Location by Milepost (as estimated by reporting officer)
- Number and type of vehicles
- Drivers action for each vehicle involved
- Type of collision
- Location in relation to intersection and roadway
- First collision point in each vehicle involved
- Contributing circumstances
- Weather, roadway surface, and light conditions
- Number of fatalities and injuries
- Day of week, hour of day, and date of crash.

As shown in Table 8, there were 862 crashes on the Loop during the six-year analysis period. Fatal crashes accounted for approximately three percent of all crashes. Overall, there were 28 fatal crashes resulting in 33 fatalities and 26 injuries. Fatal crashes doubled in 2003 compared with previous years.

Injury crashes accounted for approximately forty-three percent of all crashes. Overall, there were 368 non-fatal injury crashes that resulted in 563 injuries of varying severity. The year 2003 had the greatest number of injury crashes (69). Crashes with property damage only (PDO) accounted for approximately fifty-four percent (466) of all crashes.

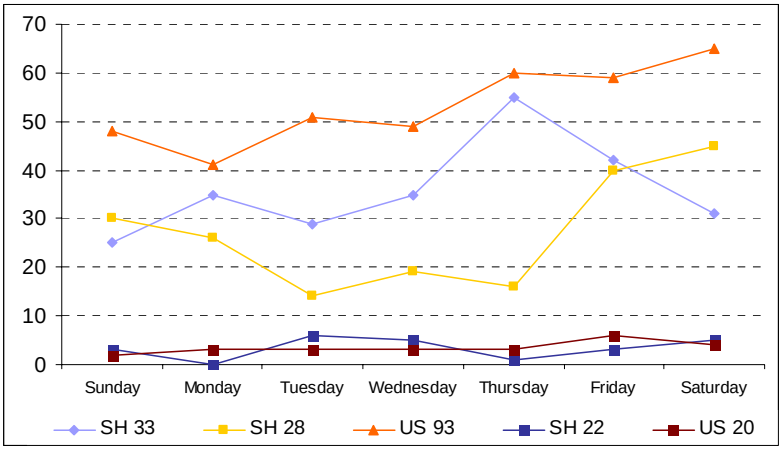
TABLE 8 CRASH HISTORY BY YEAR – LOOP TOTAL

Year	Number of Crashes								Number of Fatalities/Injuries				Persons involved in crashes
									Fatal Crashes		Injury Crashes	Total	
	Total	Fatal		Injury		PDO			Fatalities	Injuries	Injuries		
1998	119	4	3%	48	40%	67	56%		5	2	86	93	300
1999	136	3	2%	51	38%	82	60%		3	2	76	81	304
2000	141	1	1%	66	47%	74	52%		1	2	98	101	350
2001	146	5	3%	66	45%	75	51%		9	8	101	118	330
2002	149	5	3%	68	46%	76	51%		5	4	109	118	334
2003	171	10	6%	69	40%	92	54%		10	8	93	111	330
Total	**862**	**28**	**3%**	**368**	**43%**	**466**	**54%**		**33**	**26**	**563**	**622**	**1948**

PDO= Property Damage Only
Source: Idaho Department Office of Highway Safety

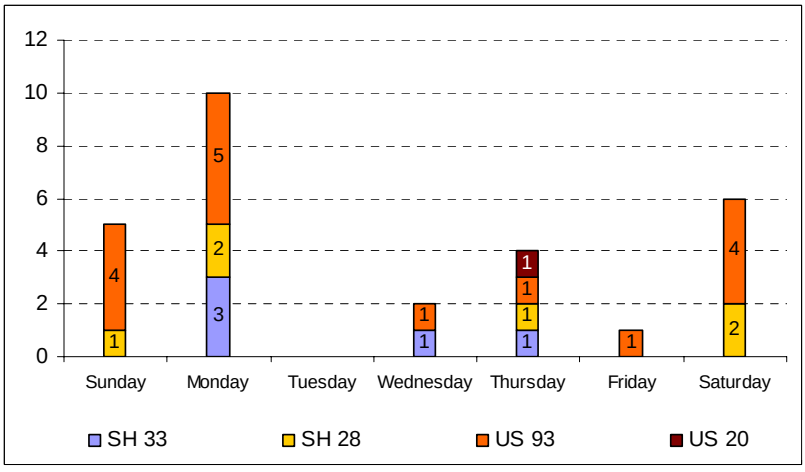
Figures 8 and 9 summarize the six-year history by day of week that the crash occurred. The pattern varies greatly among the different corridors of the Loop: while crashes on SH 33 occurred mostly during weekdays, especially Thursdays, crashes on SH 28 occurred mostly around weekends. In the case of US 93, Thursday, Friday, and Saturday accounted for the greatest portion of crashes. For the loop as a whole, fatal crashes were mostly concentrated on Mondays.

FIGURE 8: CRASH HISTORY BY DAY OF THE WEEK



Source: Idaho Department Office of Highway Safety

FIGURE 9: FATAL CRASHES BY DAY OF THE WEEK



Source: Idaho Department Office of Highway Safety

Table 9 shows that 74 percent of the total crashes occurred on a dry roadway surface. This percentage increases significantly for injury crashes and to a greater extent for fatal crashes. This suggests that as the severity of the crash increases, weather related conditions become less of an explanatory variable.

TABLE 9 CRASH HISTORY BY ROADWAY SURFACE CONDITION

Roadway Surface Condition	Number of Crashes							
	Total		Fatal		Injury		PDO	
Dry	642	74%	27	96%	298	81%	317	68%
Ice	118	14%	1	4%	42	11%	75	16%
Wet	41	5%	-	-	12	3%	29	6%
Snow	39	5%	-	-	8	2%	31	7%
Slush	18	2%	-	-	7	2%	11	2%
Other	4	0%	-	-	1	0%	3	1%
Total	**862**		**28**	**3%**	**368**	**43%**	**466**	**54%**

PDO= Property Damage Only
Source: Idaho Department Office of Highway Safety

Table 10 shows that for the Loop as a whole, 65 percent of the crashes involved only one vehicle. As expected for a low volume corridor, crashes involving three or more vehicles represent a small portion of the total (three percent).

TABLE 10 CRASH HISTORY BY NUMBER OF VEHICLES

Number of Vehicles Involved	Number of Crashes							
	Total		Fatal		Injury		PDO	
1	556	65%	21	75%	231	63%	304	65%
2	281	33%	6	21%	122	33%	153	33%
3 or more	25	3%	1	4%	15	4%	9	2%
Total	**862**		**28**		**368**		**466**	

PDO= Property Damage Only
Source: Idaho Department Office of Highway Safety

The most significant contributing circumstances are rank-ordered in Table 11. Clearly, inattentive driving and driving too fast for conditions are the most common contributing circumstances. It is interesting to note that failing to yield accounts for eight percent of the total crashes and for more than one-third of multi-vehicle crashes.

TABLE 11: CRASH HISTORY BY MOST SIGNIFICANT CONTRIBUTING CIRCUMSTANCE – LOOP

Contributing Circumstance	Number of Crashes					
	Total		Fatal		Injury	
Inatten	145	21%	8	29%	74	22%
2-Fas-4-Cond	111	16%	1	4%	46	14%
Fail-2-Yld	56	8%	-	-	25	8%
Other	45	7%	2	7%	20	6%
Sleep/Drwsy	43	6%	2	7%	29	9%
Over-Corr	41	6%	3	11%	27	8%
Alc/Drg Imp	33	5%	3	11%	22	7%
Vision-Obs	26	4%	2	7%	12	4%
Follow-2-Clos	25	4%	-	-	9	3%
Improp-Ovrtak	23	3%	1	4%	11	3%
Improp-Turn	18	3%	1	4%	4	1%
Left-Of-Cntr	16	2%	3	11%	8	2%
Veh-Defects	13	2%	-	-	5	2%
Distraction	12	2%	-	-	9	3%
Xced-Post-Sp	10	1%	-	-	4	1%
Pass-Stp-Sgn	8	1%	1	4%	-	-
Fatigued	7	1%	-	-	4	1%
Fail-2-Sig	6	1%	-	-	2	1%
Prev-Acc	6	1%	-	-	5	2%
Unk	6	1%	-	-	3	1%
Imp-Bkng	5	1%	-	-	1	0%
Sick	5	1%	-	-	4	1%
Lght-Defect	4	1%	-	-	1	0%
Tire-Defect	4	1%	-	-	3	1%
Imp-Lane-Chg	3	0%	1	4%	-	-
Phy-Impar	3	0%	-	-	2	1%
Hit and Run	1	0%	-	-	-	-
Improp-Prkd	1	0%	-	-	-	-
ImpUseTurnLn	1	0%	-	-	1	0%
Whl-Defect	1	0%	-	-	1	0%
Total	**678**		**28**	**4%**	**332**	**49%**

PDO= Property Damage Only
Source: Idaho Department Office of Highway Safety

"Junction" refers to the area formed by the connection of two roadways, including intersections, interchange areas, and entrance/exit ramps. As table 12 shows, 76 percent of the total crashes and 86 percent of the fatal crashes were at non-junction locations.

TABLE 12: CRASH HISTORY BY RELATION TO JUNCTION – LOOP

Relation to Junction	Number of Crashes							
	Total		Fatal		Injury		PDO	
Nonjunction	652	76%	24	86%	281	76%	347	74%
At Intrsct	92	11%	4	14%	40	11%	48	10%
Intrsct Rel	54	6%	-	-	23	6%	31	7%
At dr/alley	34	4%	-	-	11	3%	23	5%
Dr/ally rel	20	2%	-	-	9	2%	11	2%
Ramp relatd	5	1%	-	-	2	1%	3	1%
Other	4	0%	-	-	2	1%	2	0%
At ramp	1	0%	-	-	-	-	1	0%
Total	**862**		**28**	**3%**	**368**	**43%**	**466**	**54%**

PDO= Property Damage Only
Source: Idaho Department Office of Highway Safety

Crash data is usually reported for two types of events: First Harmful Event and Most Harmful Event. The First Harmful Event is the action during a crash that causes injury or property damage, whereas the Most Harmful Event is the episode during a crash for a particular vehicle that is judged to have produced the greatest personal injury or property damage. In most cases both events coincide, that is, the first harmful event is also the most harmful event. For the purpose of this analysis, the first harmful event data was used.

Table 13 summarizes the six-year history by the type of collision that occurred. Overall, the most frequent occurrence was an overturn collision at nineteen percent (168 crashes) of all crashes in the loop. This collision type accounted for twenty-one percent of all fatal crashes. Wild animal and rear-end collisions were the second and third most common occurrences, at eleven percent and nine percent respectively. Embankment was the second most common type of event resulting in a fatal crash.

Generally, many crashes involving wild animals would not be reported; particularly those where none or little damage to the vehicle occurred. Therefore, it might be appropriate to assume that crashes involving wild animals might be more common than the reports indicate.

TABLE 13: CRASH HISTORY BY TYPE OF COLLISION – LOOP

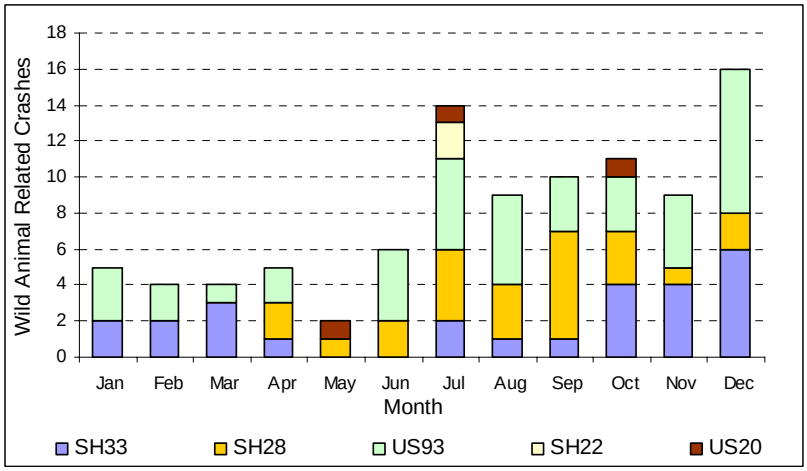
Type of Event	Number of Crashes							
	Total		Fatal		Injury		PDO	
Overturn	168	19%	6	21%	105	29%	57	12%
Wild Anim	93	11%	1	4%	12	3%	80	17%
Rear-end	80	9%	0	0%	44	12%	36	8%
Domstc Animl	56	6%	0	0%	15	4%	41	9%
Fence	52	6%	3	11%	14	4%	35	8%
SameDirTrng	43	5%	2	7%	18	5%	23	5%
Embankment	39	5%	5	18%	23	6%	11	2%
Angle	36	4%	1	4%	19	5%	16	3%
Angl Trning	28	3%	0	0%	8	2%	20	4%
SS Opposite	23	3%	0	0%	11	3%	12	3%
SS Same	22	3%	1	4%	4	1%	17	4%
Utility Pole	21	2%	0	0%	10	3%	11	2%
Oth-Not-Fix	19	2%	0	0%	9	2%	10	2%
Head-on Trng	18	2%	0	0%	10	3%	8	2%
RearEndTrng	15	2%	0	0%	3	1%	12	3%
Ditch	14	2%	0	0%	7	2%	7	2%
Other	14	2%	0	0%	6	2%	8	2%
Oth-Fixed	14	2%	1	4%	6	2%	7	2%
Tree	13	2%	3	11%	7	2%	3	1%
Head-On	11	1%	2	7%	7	2%	2	0%
Sign-Post	11	1%	1	4%	4	1%	6	1%
Parked Veh	8	1%	0	0%	3	1%	5	1%
Backed into	7	1%	0	0%	1	0%	6	1%
Grdrl Face	7	1%	0	0%	3	1%	4	1%
Jackknifed	7	1%	0	0%	0	0%	7	2%
Crgo Loss	6	1%	0	0%	4	1%	2	0%
Culvert	6	1%	1	4%	2	1%	3	1%
Delin. Post	6	1%	0	0%	5	1%	1	0%
Pedestrian	6	1%	1	4%	5	1%	0	0%
Sep-of-Units	6	1%	0	0%	1	0%	5	1%
Other Pole	5	1%	0	0%	1	0%	4	1%
Brdg-Pier	3	0%	0	0%	1	0%	2	0%
Fire	3	0%	0	0%	0	0%	3	1%
Bridge Rail	1	0%	0	0%	0	0%	1	0%
Ovhd Sgn Sup	1	0%	0	0%	0	0%	1	0%
Total	**862**		**28**	**3%**	**368**	**43%**	**466**	**54%**

PDO= Property Damage Only

Source: Idaho Department Office of Highway Safety

Figure 10 shows how the 93 total crashes involving wild animals were distributed in terms of route and time of the year. December is the month when most crashes occurred, followed by July. For both SH 33 and US 93 most of the wild animal related crashes occurred during December. In the case of SH 22, a high number of crashes occurred in September and mainly during summer and fall season.

FIGURE 10: WILD ANIMAL RELATED CRASHES BY ROUTE & TIME OF YEAR – LOOP



Source: Idaho Department Office of Highway Safety

General Recommendations:

- Widen shoulders to provide drivers with more recovery room when loss of vehicle control occurs and to prevent some vehicles from running off the road or colliding with objects along the side of the road. Overturn was the most common type of event resulting in almost 20 percent of the total crashes.

- Provide adequate clear zones to allow for more recovery room and install guardrails where this is not possible, particularly on US 93 between mileposts 280 and 284 and mileposts 306 and 314. Embankments and trees were the two most common events in the case of fatal crashes.

- Use rumble strips to alert inattentive, distracted, or sleepy drivers when vehicles drift onto the road shoulder or cross the centerline into oncoming traffic. Inattentive driving was the first most significant contributing circumstance for total, fatal and injury crashes.

- Widen four-inch pavement markings to six-inches or more (over 29 states have adopted this policy).

- Develop policies to effectively reduce the high involvement of young drivers in crashes. Young drivers tend to underestimate risks associated with traffic hazards and overestimate their ability to control a vehicle under emergency conditions. In addition, younger drivers tend to feel that driving is a right and have minor concerns about the obligations associated with the activity. A pilot program could be initiated by ITD District 6 to create a task force with local young drivers and/or crash victim's parents with the intent of conducting meetings and workshops to provide direct and vivid experience of situations associated with the obligations and risks involved in driving.

FIGURE 11: ACCIDENT DESCRIPTIONS

SH 33 / 2000 West
Madison Co. Transportation Plan
Keller Associates

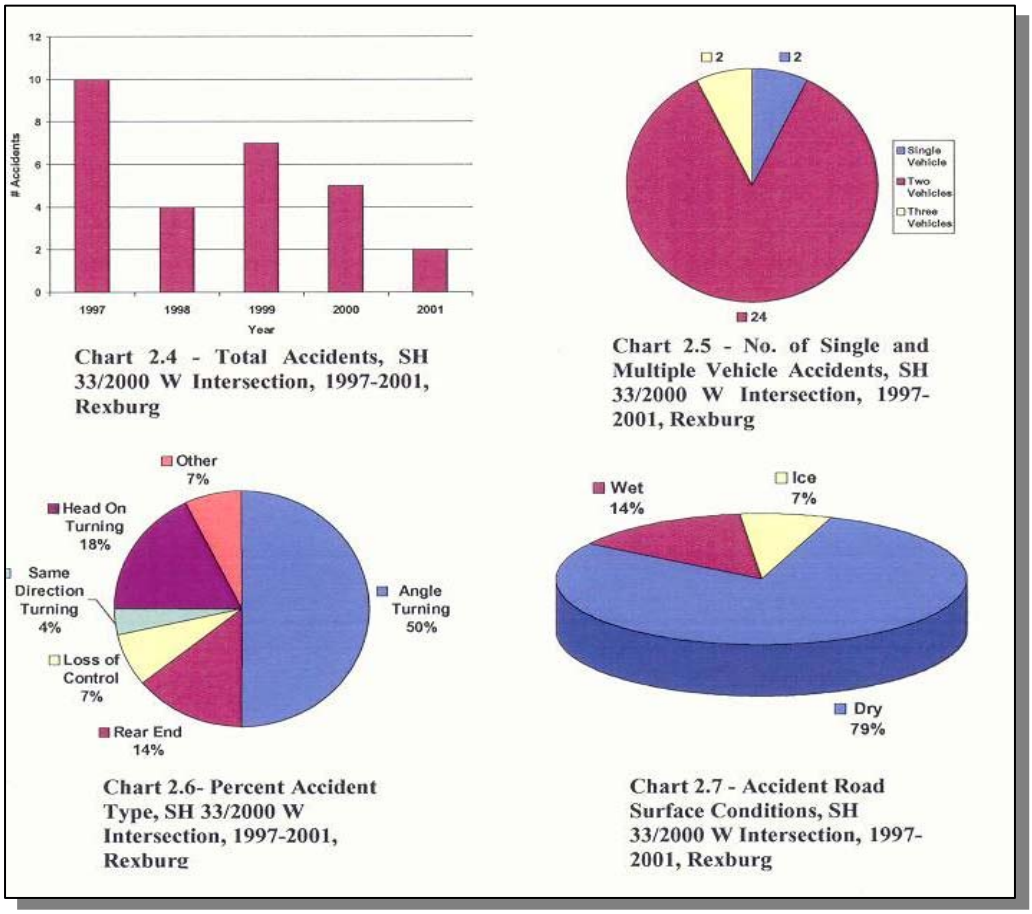


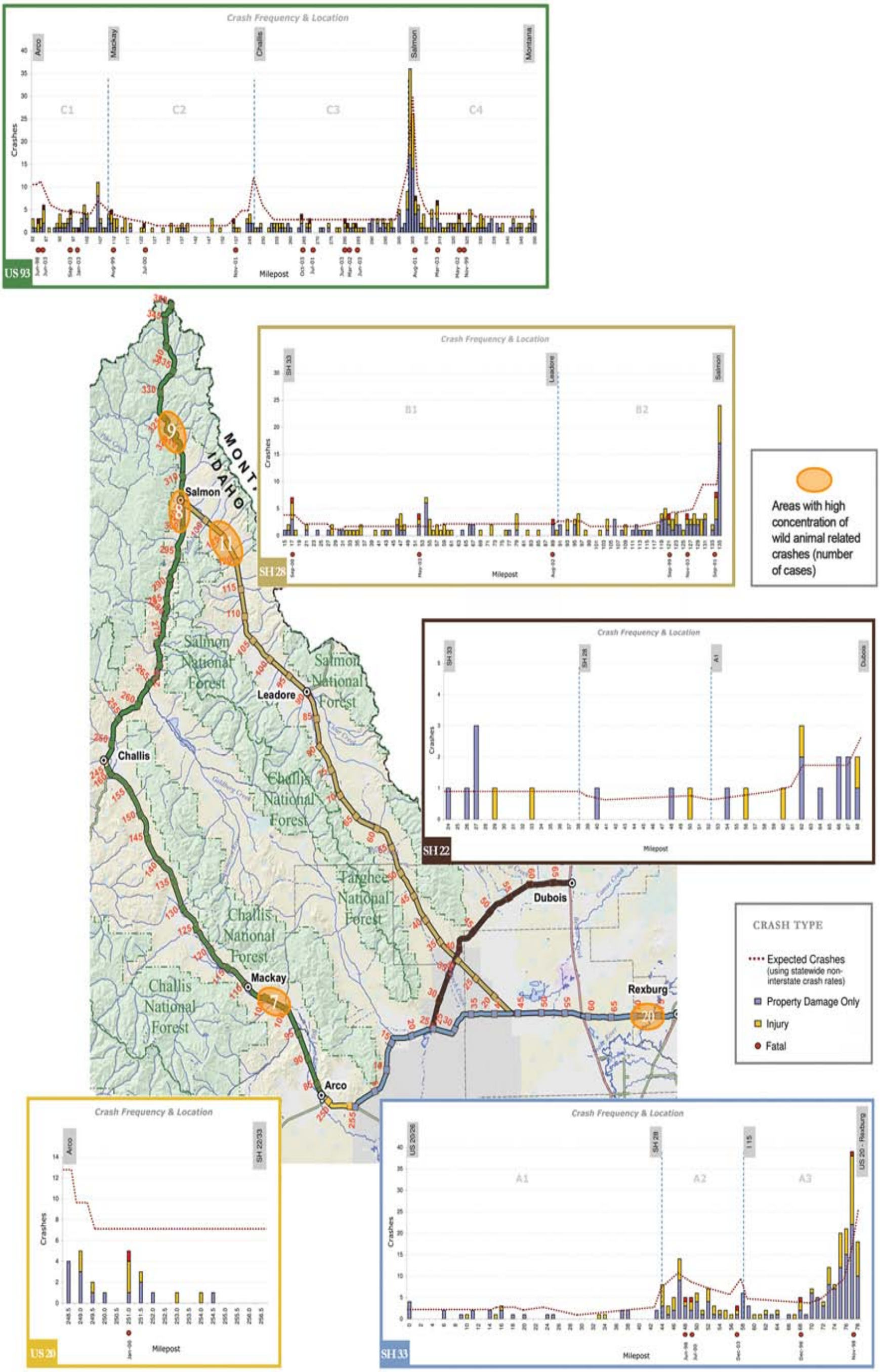
Chart 2.4 - Total Accidents, SH 33/2000 W Intersection, 1997-2001, Rexburg

Chart 2.5 - No. of Single and Multiple Vehicle Accidents, SH 33/2000 W Intersection, 1997-2001, Rexburg

Chart 2.6- Percent Accident Type, SH 33/2000 W Intersection, 1997-2001, Rexburg

Chart 2.7 - Accident Road Surface Conditions, SH 33/2000 W Intersection, 1997-2001, Rexburg

FIGURE 12: ACCIDENT LOCATIONS



3.3.5 Utilities

Since the East Idaho Loop Corridor consists primarily of rural highway, there are several different service providers (many of which are small cooperatives) for telephone and electric utilities. There are five main power providers throughout the Loop: Fall River Rural Electric Cooperative serving parts of Rexburg, Lost River Electric Cooperative serving Mackay, Idaho Power serving Leadore and Salmon, Salmon River Electric Cooperative serving Challis, and Utah Power and Light serving Arco, Dubois, Howe, Mud Lake, and Rexburg. Telephone services are provided by ATC in Arco, Mackay, and Howe; CenturyTel in Salmon and Leadore; Custer Telephone Cooperative in Challis; Mud Lake Telephone Cooperative in Dubois, Mud Lake, and Terreton, and; Qwest in Rexburg.

According to the staff of each of the power companies, there are no major changes to the lines or features along the Loop planned in the next five years. The Mud Lake Telephone Cooperative is planning to bury existing overhead lines along the right-of-way fence on a small section of SH 22 from Lidy Hot Springs to Crooked Creek. No other major changes to telephone services are anticipated.

3.4 SUMMARY OF EXISTING TRAFFIC CONDITIONS

The investigation of existing conditions on the East Idaho Corridor Loop transportation system identified a number of issues to be considered in the development of the corridor plan, which are described in the following list.

- Deficiencies in horizontal alignment exist over most of the corridors in the Loop. Along SH 33, the areas of major concern are at mileposts 77.2 and 77.5 on the roadway section approaching Rexburg. Along US 93, there are sixty-eight locations where curvature is greater than recommended, particularly between mileposts 280 and 290, and between mileposts 318 and 325. Opportunities for improvement of horizontal curvature exist along SH 28, SH 22, and US 20.

- There are only minor vertical alignment deficiencies along the Loop at milepost 4 along SH 33 and at mileposts 116, 123, and 249 along US 93.

- Passing sight distance and passing opportunities are limited along US 93, in particular between Challis and Salmon. Possible locations for passing lanes and pullouts for slow moving vehicles are identified in Chapter 7.

- Shoulder width and condition are extremely poor in a significant portion of the corridor. Almost 23 percent of SH 33, 12 percent of SH 28, 56 percent of US 93, and 63 percent of SH 22 have shoulder width of one-foot or less.

- Access control measures should be enhanced on eight different locations identified along SH 33, SH 28, and US 93, and described in Table 14.

TABLE 14: LOCATIONS OF ACCESS MANAGEMENT CONCERN

Route	Segment Description	Milepost Range
SH 33	Henry's Fork crossing to US 20	75.0 – 78.3
	Mud Lake – Terreton Area	44.2 – 48.0
SH 28	North of Leadore	90.5 – 92.0
	Baker Area	126.0 – 130.0
	South of Salmon to Sacagawea Center	133.0 – 135.0
US 93	Mackay Area	104.0 – 113.0
	Salmon to Carmen Creek	306.0 – 310.0
	North Fork Area	324.0 – 327.0

Source: HDR Analysis

- Pavement condition is poor in several locations along the corridor, where approximately 17 percent of SH 33, five percent of SH 28, 33 percent of US 93, 31 percent of SH 22 and 71 percent of US 20 have pavement in poor or very poor conditions (significant improvements to pavement that have taken place over the last two years on US 93 and SH 22 are not reflected in these percentages).

- There are only two bridges in poor condition along the corridor; one at milepost 125.6 on SH 28 and the other at milepost 256.8 on US 93 (which is scheduled for replacement in 2006).

- The Average Daily Trips are expected to grow by 1.7 percent annually along US 93 as well as US 20, which are the two corridors with the highest growth rates in the Loop. Future ADT along SH 33, particularly near Rexburg, might be higher than forecasted since population and employment forecasts for the Rexburg area show an annual growth rate of around 2.2 percent.

- Truck traffic is expected to increase at a higher rate than general vehicle traffic where along some segments, it is expected to represent between twenty-five and thirty percent of ADT.

- Even though crash rates are significantly lower than Statewide Non-Interstate crash rates, the number of crashes in the Loop has constantly increased during the last six years. Fatal crash rates along the SH 33, SH 28, and US 93 corridors are above Statewide Non-Interstate fatal crash rates. US 93 in Salmon and SH 33 west of Rexburg have the highest concentration of crashes.

- There is the need and the desire for enhanced bicycle and pedestrian facilities at and around urban areas.

- Corridor volumes are so low that no level of service concerns exist now or in the future, with the exception of a few intersections in the City of Salmon which were studied as a part of the Salmon Transportation Plan.

SECTION 4: REVIEW OF EXISTING PLANS

An important part of the corridor planning process is the review of existing plans to examine the goals, growth projections, project needs, and data sources in the variety of state, and local plans in order to achieve consistency between plans. This section summarizes points from a number of plans that are relevant to the East Idaho Corridor Loop Plan.

4.1 STATE TRANSPORTATION PLANS SUMMARY

IDAHO TRANSPORTATION PLAN: The *Idaho Transportation Plan* (ITP) is a statewide, inter-modal, long-range transportation plan that was adopted by the Idaho Transportation Board on January 12, 1995. The ITP was developed to guide multi-modal planning with statewide transportation goals, objectives, and strategies, wherein corridor planning is supported by the background information and needs identification provided in the ITP.

IDAHO STATE HIGHWAY PLAN: The *Idaho State Highway Plan* provides an overall assessment of state highway needs without making specific project recommendations. The highway plan lists six priorities that are to be used to provide direction for managing the existing highway system and deciding how to distribute and improve funding for proposed construction projects

ITD BOARD AND ADMINISTRATIVE POLICIES: The State of Idaho's Administrative Policies and Division Memorandums were reviewed for information relevant to the East Idaho Corridor Loop Plan. Administrative Policy A-09-04, Corridor Planning for Idaho Transportation Systems, presents a list of the tasks to be accomplished through the planning process.

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP): The Statewide Transportation Improvement Program (STIP) outlines Idaho's transportation projects and programs for fiscal years 2003-2007, preliminary development is also included in the STIP for informational purposes. The STIP is essentially a funding document that prioritizes and schedules the distribution of the department's resources. Multiple STIP projects have been scheduled in the East Idaho Corridor Loop area for the 2004-2006 timeframe.

TABLE 15: STIP PROJECTS ON EICL

Corridor	Mileposts	Project Location/Description	Project Type	Year
SH 33	29.1 – 38.5	Test Area NE, Jefferson Co.	Minor widening & resurfacing	2004
	77.9 – 78.2	Int 200W to Jct. US 20	Miscellaneous	2004
	73.43-77.85	Henry's Fork Bridge To 12th W.	Pavement Rehab.	2006
	Aero	Rexburg	Extend runway safety area	2005
SH 28	N/A	Leadore Mining & Railroad interpretative center	Miscellaneous	2005
US 93	256.5 – 257.2	Watts Br, Lemhi Co.	Bridge Replacement	2007
	326.0 – 337.0	N. Fork Br. to Gibbonsville Rd	Minor widening & resurfacing	2006
	N/A	Salmon material source	Miscellaneous	2006
	137.0 – 159.6	Challis south	Pavement rehab	2004
	268.0 – 280.8	Iron Cr Rd, south, Lemhi Co.	Resurfacing	2005
	N/A	Salmon Historic Pedestrian Br.	Bicycle / Pedestrian pathway	2005
	95.3 – 108.5	Mackay, south	Pavement rehab.	2006
	115.5 – 122.0	Sportsman access Rd to MP 122	Pavement rehab.	2006
	305.2 – 305.3	Salmon River Br, Salmon	Miscellaneous	2009
	304.0 – 306.0	Salmon Alt route feasibility study	Planning / Transportation Study	2004
	337.4 – 337.4	Lucky Strike Homestead Preservation	Improve drainage	2006
	90.7 – 96.3	Moore, north	Pavement rehab.	2006
	122.0 – 131.3	Double Springs Rd, south, Custer Co.	Pavement rehab.	2006
	N/A	Salmon Police	Safety restraints program	2004
	Aero	Salmon	Install perimeter fence – rehab runway	2006
	Aero	Challis	Acquire development land	2004
SH 22	47.0 – 59.6	MP 47.0 to MP 59.6, Clark Co.	Resurfacing	2007
SH 20	Aero	Arco	Rehab entrance Rd, rehab runway lighting	2004
	Aero	Arco	Construct west apron, construct hanger taxiways	2006

Source: *District 6 Project List 2004-2008 STIP. Minor Aeronautic Projects such as pavement maintenance are not included in this table.*

MOVIN' IDAHO (IDAHO PUBLIC TRANSPORTATION PLAN: *Movin' Idaho* is a public transportation plan intended to make recommendations to create a coordinated, efficient, and safe public transportation system. While *Movin' Idaho* is a statewide plan, public transportation goals for Region 6 are identified separately.

IDAHO BICYCLE AND PEDESTRIAN TRANSPORTATION PLAN: The *Idaho Bicycle and Pedestrian Transportation Plan* has been prepared in an effort to create a balanced transportation system that recognizes the unique benefits of bicycling and walking, and provides specific policies and action strategies to reach the plan goals.

IDAHO'S TRANSPORTATION VISION: The Vision provides a new tool for sharing rights and responsibilities through a series of mutual principles, with priorities can then be used by Idaho's transportation partners as they make decisions, plan policy, and chart their future operations.

4.2 LOCAL PLANS SUMMARY

The following summary of local plans represents the relevant highlights of each of plan that were considered in the development of the East Idaho Corridor Loop Plan. This summary is intended to compliment the review of the socio-economic and current land use conditions.

- **LEMHI COUNTY**: The primary issue shown in the comprehensive plan concerns the new residential growth that accesses either SH 28 or US 93. The EICLP should address the potential for left turn and right turn lanes for areas of substantial development to minimize accidents and improve safety. ITD should work closely with Lemhi County regarding access management policies that seek to minimize the number of new accesses to state highways.

- **BUTTE COUNTY**: The comprehensive plan addresses issues such as the need to provide safe access, maintain facilities that support mixed use for agriculture, commercial, tourism, and local personal travel, and to help preserve the scenic qualities of the corridor by the control of billboard and signage appearance and location. Close coordination between ITD and Butte County is encouraged to ensure optimum management of these primary issues.

- **MADISON COUNTY**: The primary issues from the Madison County Transportation Plan include the encouragement of Madison County and ITD to work closely together to improve the safety and level of service for intersections on SH 33 west of the city. ITD should work closely with Madison County to improve safety by coordinating the planning and development of improvements to county road intersections, to minimize conflicts with new residential development along SH 33, and to consider the realignment of "S" turns to improve safety

- **REXBURG**: Key issues from the City of Rexburg Comprehensive Plan include improved access control on SH 33 west of Rexburg and the support of the planned bike and pedestrian facility to provide safe connection between residential areas and the city. Bike and pedestrian facilities along SH 33 are recommended to be developed as a separated pathway to enhance safety for use by children traveling between neighborhoods or into the city.

- **SALMON**: The City of Salmon has primary activities to be addressed which include coordination between ITD and the City of Salmon to reduce the accidents on US 93 through downtown Salmon, the conclusion of the design and implementation of the planned Salmon River Bridge enhancement project, the improvement of the efficiency and safety of the US 93 / Courthouse Road intersection, the enhancement of the US 93 / SH 28 intersection to correct geometric deficiencies, the implementation of a study for a potential US 93 alternate

route around Salmon (beginning with an origin and destination study), an assessment of speed limits at city entrances, and the expansion of bike and pedestrian facilities in and out of the city. The Sacajawea Historic Byway Plan encourages ITD to work with the City of Salmon, the Sacajawea Center, and the Sacajawea Center Byway Committee to plan and implement the appropriate signage and pullouts along SH 28 to highlight the interpretive sites identified in the Byway Plan. In addition, the City and ITD should work together to minimize new signage and billboards along the route that have negative impacts to the viewshed.

- **CHALLIS**: Important concerns for the City of Challis include the enhancement of pedestrian safety along US 93 through Challis, support of the development of new bike and pedestrian facilities (pursuant to the City's bike and pedestrian plan), and the enhancement of the US 93 / Main Street intersection pursuant to the Challis Downtown Revitalization Plan.

- **ARCO**: The recent completion of the Arco Transportation Plan includes specific improvements to US 93 and US 20/26 as they pass through Arco. EICLP Projects should include intersection widening and re-alignment to US 93 and US 20/26 (to accommodate trucks and improve visibility and safety), re-striping to improve delineation of turn lanes and parking areas, and ITD support of the City for the development of new bike and pedestrian facilities pursuant to the bike/pedestrian plan.

4.3 CITY AND COUNTY DEVELOPMENT CODES

The review of city and county development codes is located in the appendix of this report.

SECTION 5: DEMOGRAPHICS, EXISTING LAND-USE & ENVIRONMENTAL CONDITIONS

5.1 INTRODUCTION

The community profile is a review of the population in the six-county region, its economy, growth, travel patterns, income, and housing. It examines the changes that have occurred in the area over the last decade, (1990 Census to the 2000 Census) and projects trends in population and employment growth through 2030. The data is presented as an overview to reflect the patterns of the region, county, and the six cities (or nodes of specialized activity) within the area - Arco, Challis, Dubois, Mackay, Rexburg, and Salmon.

The profile defines the relationship between relevant demographic variables (total population, location of said population, age, levels of income, employment) to measure the demand for transportation facilities (roadways, intersections, and turning lanes) and transportation services such as transit and carpooling. Once the current conditions have been described in the community profile, forecasts of population, households, and employment are prepared to quantify demographic changes over time and how those changes may affect the regional transportation system.

Current and ten-year trends in population and employment may be compared to transportation variables such as volume and accidents to determine what, if any, pattern may exist. The number of households in an area has an impact on levels of traffic as members of those households travel to work, recreate, or other activities. As new housing units are built, or as vacant units are filled, travel patterns change. Construction of seasonal homes will affect road facilities and traffic volumes during tourism seasons.

An examination of income levels and commuting characteristics is included in the community profile because they also impact traffic volumes and levels of service on a corridor. Households with higher incomes generally are better able to afford to travel by car and may have multiple vehicles available to them. The rising cost of fuel has more of an impact on lower income households than on households with higher levels of disposable income. The method to reach the workplace and the length of time it takes to get there are crucial variables in determining the type and location of transportation facilities.

Once current conditions have been described in the community profile, forecasts of population, households, and employment are prepared to quantify demographic changes over time and how those changes may impact the regional transportation system. The final section of the community profile discusses the transportation impacts of the profile and forecasts.

5.2 TRANSPORTATION IMPACTS OF THE COMMUNITY PROFILE AND FORECASTS

Seven major conclusions and appropriate recommendations have been drawn as a result of examining past trends and current conditions and from preparing long-range forecasts for the region, which are as follows:

- There is a very low level of demand for major facility upgrades or the use of transit in the rural areas of the corridor due to the sparsely developed nature of the region. Its current and projected levels of population, households, and employment do not create sufficient demand for major facility upgrades and increased transit development. The

exceptions would be at the Idaho National Laboratory and the City of Rexburg where concentrations of employment or population may justify the expansion of existing transit services.

- The forecast for the population in the region is to continue to consist largely of the older persons cohort due to the natural aging process, the low out-migration rate of existing residents, and the in-migration of semi-retirees and retirees. The special transportation needs of an older population will need to be addressed during the 30 year forecast period, including modification to existing facilities and the provision of other modes of transportation.

- Tourism traffic in the region, especially in Lemhi County and in and around Salmon, should continue to increase in part due to the aging of the national population. The older portion of the baby-boom population is likely to travel more as they enter the early phase of retirement or semi-retirement. Some of their travel plans may include south-central Idaho due to the abundance of recreational activities in the area.

- Some retail and tourism related activity is occurring adjacent to the corridor between Arco and Mackay which may continue in that area in the future. However, there are no major development proposals approved and ready for construction in that portion of the corridor.

- Population forecasts provided by the City of Rexburg show student enrollment at BYU-Idaho to be at 12,700 by the year 2020. Any change in enrollment patterns would affect Rexburg's and Madison County's population, household, and employment forecast which would likely impact the demand levels on the SH 33/US 20 intersection and the surrounding corridor area.

- The construction of second, seasonal, or vacation homes in the area is expected to continue and may reach an all time high based on lot sales and building permitting activity - especially in Salmon and unincorporated Lemhi County. Higher levels of traffic demand in summer months (generally the peak travel time) will be generated as a result of these property owners and the increased visitor activity.

- Population and household forecasts for Salmon and Lemhi County were based in part on past trends in population in-migration. Demand for recreational units in the area (especially semi-retirement and second or seasonal homes) may be increasing based on recent lot sales and residential building permitting activity. These Increasing levels may be greater than past migration trends in the area and may impact future levels of population and households in the city and county. It is recommended that sales be monitored annually and compared to long-range forecasts.

5.3 REGIONAL CONTEXT

5.3.1 Overview

The six-county study area comprises 9.6 million acres (15,000 square miles) of diverse topography including lush forest, desert, lava beds, sagebrush plains, grasslands, and Borah Peak, the highest point in the state at 12,662 feet. With dense and rapidly growing urban areas, population density ranges from 0.6 persons per square mile to multi-story apartment complexes adjacent to a university. The economy for much of the area traditionally has been extractive, dependent on mining, logging, and agriculture, although high-tech and biotech industries, as well as higher

education opportunities are now available. Recreation is a universal component in the region and includes hunting and fishing, winter snow sports, wilderness backpacking and river-rafting opportunities.

5.3.2 Population

The six county area's population in the 2000 Census totaled 62,691, an increase of 7,762 (14 percent) from 1990, less than half the statewide population increase during the same period of 29 percent. The age category of 45 to 59 years old showed a 47 percent increase, the largest increase measured in the area, yet still below that statewide increase of 66 percent for the same age category. The second largest increase was in the 15 to 29 year old category, up twenty-seven percent and closer to the statewide increase of 33 percent. The youngest age category, less than 15 years old, registered an eight percent decline, losing 1,260 persons (statewide the increase was 16 percent). However, the population in the study area is relatively young, with the two youngest age categories (Under 15 and 15 to 29) totaling 34,975 persons in 2000, or about 55 percent of the total population (See Table 16).

TABLE 16: REGIONAL POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	16,173	14,913	-1,260	-8%
15 to 29	15,774	20,062	4,288	27%
30 to 44	9,788	10,318	530	5%
45 to 59	6,348	9,348	3,000	47%
60 to 74	4,733	5,322	600	13%
75 and Older	2,124	2,728	604	28%
Total	54,929	62,691	7,762	14%

Sources: Intermountain Demographics, U.S. Census Bureau

5.3.3 Race and Hispanic Origin

The region's White population constitutes the largest racial category, although the Hispanic origin population recorded the highest growth rate in the 1990-2000 period. Of the total regional population in 2000, the White category constituted 58,906, or 94 percent. Hispanic origin totaled 2,998, or just fewer than five percent. The remaining racial categories (Black, Indian, Asian, and Other) constitute the remaining one percent. Two racial categories, Indian and Asian, showed declines in their population of 17 percent and 23 percent, respectively (See Table 17). These figures closely parallel Idaho's overall population, which in 2000 was 91 percent White, eight percent Hispanic origin, one percent each Indian and Asian, and six percent classified as Other. (A Hispanic may be of any race; adding Race and Hispanic origin may yield more than one-hundred percent).

TABLE 17: 1990 TO 2000 RACE AND HISPANIC ORIGIN

Race	1990 Population	2000 Population	# Change	% Change
White	52,702	58,906	6,204	12%
Black	54	135	81	150%
Indian	339	280	-59	-17%
Asian	383	294	-89	-23%
Other	1,451	3,076	1,625	112%
Total	54,929	62,691	7,762	14%
Hispanic Origin	2,318	2,998	680	29%

Sources: Intermountain Demographics, U.S. Census Bureau

5.3.4 Housing Units and Households

The total number of housing units in the region increased by 18 percent between 1990 and 2000, lagging behind the overall state increase of 28 percent. While each of the six counties individually showed an increase in the total number of housing units, ranging from two percent in Butte County to 24 percent in Madison County, two counties showed an increase in the number of vacant units. Custer County's housing vacancy rate increased by thirty-eight percent and Madison County's vacancy rate climbed by 51 percent. Overall, the number of vacant units in the region increased by six percent (See Table 18). The number of seasonal housing units (generally vacation, recreation, or second homes) increased in the region by 15 percent over the decade compared to the statewide increase in seasonal homes of 13 percent.

TABLE 18: 1990 TO 2000 REGIONAL HOUSING CHARACTERISTICS

Housing Characteristic	1990	2000	# Change	% Change
Total Units	19,442	22,865	3,423	18%
Occupied Units (Households)	16,276	19,504	3,228	20%
Owner-Occupied	11,460	14,114	2,654	23%
Renter-Occupied	4,816	5,390	574	12%
Vacant Units	3,166	3,361	195	6%
Seasonal Units	1,294	1,492	198	15%

Sources: Intermountain Demographics, U.S. Census Bureau

5.3.5 Employment

The number of persons employed in the region increased from 31,885 in 1990 to 37,148 in 2000, a 17 percent increase. Overall, employment in the state increased by 37 percent over the same ten year period. While the Financial and Services industries showed healthy increases of 63 percent and 43 percent respectively, Mining and Manufacturing declined. Mine closures and layoffs decreased that workforce segment by over half, from 879 to 383 workers; manufacturing, which includes agricultural processing plants and timber processing mills, dropped by 35 percent, from 3,690 workers in 1990 to 2,389 in 2000. Layoffs at the INL facility adversely affected surrounding counties. The number of persons engaged in farming stayed nearly the same and allied Agricultural Services increased by 305 workers, or 29 percent. The single largest increase,

however, was in the Construction industry, which nearly doubled its workforce from 1,059 to 2,091 workers (See Table 19). Employment in the Services, Retail Trade, and Financial categories have been positively impacted by the transition of Ricks College from a two year junior college to a four year University, by an increase in the tourist industry, and by a growing number of call service centers locating in the urban areas of the region.

TABLE 19: 1990 TO 2000 REGIONAL EMPLOYMENT

Economic Sector	1990 Employment	2000 Employment	# Change	% Change
Farming	3,715	3,728	13	0%
Agricultural Services	1,068	1,373	305	29%
Mining	879	383	-496	-56%
Construction	1,059	2,091	1,032	97%
Manufacturing	3,690	2,389	-1,301	-35%
Transportation/Utilities	717	862	145	20%
Wholesale Trade	1,269	1,714	445	35%
Retail Trade	3,621	4,593	972	27%
Financial	878	1,434	556	63%
Services	9,722	13,886	4,164	43%
Government	5,267	4,695	-572	-11%
Total	31,885	37,148	5,263	17%

Sources: Intermountain Demographics, U.S. Census Bureau

5.3.6 Income

The largest number of households in the region, 3,526 or 18 percent, were in the $10,000 to $20,000 household annual income range in 2000, although the number of households in this range fell by 17 percent from 1990. The next largest concentration of 3,170 households, 16 percent, was in the next highest category, the $20,000 to $30,000 category. The number of households in this category fell by seven percent from 1990. These household income figures closely follow the statewide numbers, including the percentage of decline from 1990 to 2000. The percentage (ten percent in 2000) and decline in the number of households (30 percent) in the lowest category, under $10,000, also follow Idaho's statewide figures. The remaining income categories also closely follow the statewide figures, both for percentage of households and change in distribution from 1990 to 2000 (See Table 20).

TABLE 20: 1990 TO 2000 REGIONAL HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	2,711	1,898	-813	-30%
$10,000 to $20,000	4,272	3,526	-746	-17%
$20,000 to $30,000	3,424	3,170	-254	-7%
$30,000 to $40,000	2,501	2,968	467	19%
$40,000 to $50,000	1,365	2,374	1,009	74%
$50,000 to $60,000	704	1,794	1,090	155%
$60,000 to $75,000	716	1,654	938	131%
$75,000 to $100,000	348	1,220	872	251%
$100,000 to $150,000	163	603	440	270%
Over $150,000	129	307	178	138%
Total	16,333	19,514	3131	19%

Sources: Intermountain Demographics, U.S. Census Bureau

5.3.7 Transportation Characteristics

The transportation method used by residents in the region to access their workplace parallels statewide figures but shows that a slightly higher number rely on carpooling, attributable in part to encouragement, and the bus/van systems available to INL employees. In the Drove Alone category, the regional number of 73 percent is below the statewide number of 77 percent, and the Carpooled category of 14 percent is correspondingly higher than the 12 percent statewide (See Table 21).

Commute time varies from the statewide figures, reflecting the smaller urban areas in the study region which require less driving time and lighter traffic loads during peak commute times. The 35 percent of regional workers commuting to their workplace in the Under 10 minutes category compares to 23 percent statewide while those in the 10 to 30 Minutes category, forty-three percent, compare to 51 percent statewide. However, the number in the 30 to 60 Minutes category, 15 percent, is more than double the seven percent in the same category statewide.

TABLE 21: 2000 REGIONAL TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	17,754	73%
Carpooled	3,510	14%
Other	3,189	13%
Commute Time		
Under 10 Minutes	8,494	35%
10 to 30 Minutes	10,788	43%
30 to 60 Minutes	3,546	15%
Over 60 Minutes	1,614	7%

Sources: Intermountain Demographics, U.S. Census Bureau

5.4 COUNTY ANALYSES

The next level of analysis in the corridor plan is to look at trends and existing conditions for each of the six counties in the region. An examination of each county is necessary because of the large land area and diversity of activities in the region – ranging from counties with low, highly dispersed populations to a county with a high-density student population. Economic activities are equally diverse, including ranching and cattle grazing, nuclear research, and tourism.

5.5 NODAL ANALYSIS

The forecasting process includes the preparation of population, household, and employment data for the six largest cities or nodes in the region. These cities are nodes, or concentrations of population and economic activity, in an otherwise sparsely settled, isolated area of the state. In general, the forecast showed that the smaller, more isolated cities (Arco, Challis, Dubois, and Mackay) will continue to have the lowest numerical and percentage changes in population, households, and employment. Even though it is also relatively isolated, Salmon's population, households, and employment will all increase by more than one-half. Rexburg, the largest and fastest growing city in the region, will continue to post the greatest gains in population, households, and employment.

A series of forecasts were prepared for the community profile in which county data were combined to produce forecasts for the entire region. Those forecasts, in turn, are used as one variable in forecasting overall future levels of traffic volume and to pinpoint more specific areas of increasing traffic in the corridor.

5.5.1 Arco

Arco, population 1,026, is centrally located in Butte County and sits at the junction of two main highway corridors, US 93 and US 20/26. As the county seat, it serves as the county government and administration center while also serving the tourist population traveling from eastern Idaho to the Sun Valley resort area and to the nearby Craters of the Moon National Monument.

TABLE 22: 1990 TO 2000 ARCO POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	255	240	-15	-6%
15 to 29	156	166	10	6%
30 to 44	233	180	-53	-23%
45 to 59	162	198	36	22%
60 to 74	124	168	44	35%
75 and Older	86	74	-12	-14%
Total	1,016	1,026	10	1%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.1.2 Race and Hispanic Origin

The White population (976 out of 1,026) totaled 95 percent in the 2000 Census, remaining steady from the 1990 figure. The Hispanic origin population declined by 27 percent over the decade, decreasing from 51 persons in 1990 to 37 in 2000.

5.5.1.3 Housing Units and Households

Total housing units in the city increased slightly between 1990 and 2000, from 485 to 505, a four percent increase. Owner-occupied housing units increased three percent, from 280 to 289 units, and rental units increased from 118 to 138, a 17 percent increase. The number of vacant housing units declined by ten percent from 87 to 78.

5.5.1.4. Employment and Wages

Non-farm employment opportunities in Arco are limited. The Butte County government employs 70 persons and the Lost River Hospital and School District each employ around 100 persons. Countywide, around 120 workers are employed at INL. Some employment opportunities are available through federal government agencies, including BLM and the National Park Service at Craters of the Moon National Monument, which is 22 miles from Arco. Government-related jobs paid an average annual wage of $22,996 in 2003; education and health-service related jobs paid an average annual wage of just over $24,000.

5.5.1.5 Income

Three income categories showed declines in the 1990 to 2000 decade: the number of households in the $30,000 to $40,000 category fell 35 percent (from 68 to 44); the Under $10,000 category fell 19 percent (93 to 75); and the $20,000 to $30,000 category fell by four percent (83 to 80 households). An increase in construction jobs and increased wages paid in the government and health and educational fields contributed to the increase in the number of households in the $40,000 to $50,000 category, up 48 percent, and the $60,000 to $75,000 range, up from 16 to 30 jobs (See Table 23). Per capita income in Arco residents increased 41 percent from $10,453 in 1990 to $14,744 in 2000.

TABLE 23: 1990 TO 2000 ARCO HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	93	75	-18	-19%
$10,000 to $20,000	85	100	15	18%
$20,000 to $30,000	83	80	-3	-4%
$30,000 to $40,000	68	44	-24	-35%
$40,000 to $50,000	44	65	21	48%
$50,000 to $60,000	19	20	1	5%
$60,000 to $75,000	16	30	14	88%
$75,000 to $100,000	2	23	21	-
$100,000 to $150,000	2	9	7	-
Over $150,000	0	3	3	-
Total	412	449	37	9%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.1.6 Transportation

Nearly two-thirds (63 percent) of Arco residents reported driving to work alone while 22 percent carpooled (See Table 24). More than half (56 percent) reported driving less than ten minutes to work and 21 percent reported taking between 10 and 30 minutes.

TABLE 24: 2000 ARCO TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	247	63%
Carpooled	83	22%
Other	60	15%
Commute Time		
Under 10 Minutes	220	56%
10 to 30 Minutes	81	21%
30 to 60 Minutes	63	16%
Over 60 Minutes	26	7%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.2 Challis

Challis is located at the junction of SH 75 and US 93, both major tourist routes serving the Sun Valley/Sawtooth recreation areas. As the county seat, it serves as the Custer County governmental and administration center, and as a commercial and shopping center for the remote areas of the northern county.

5.5.2.1 Population

Challis lost population between the 1990 and 2000 Census counts, a decline that continued through 2003. The population declined by 15 percent to 909 residents in 2000 and suffered a further drop of eight percent to 873 by 2002. The largest declines are noted in the young family segment of the population who are most affected by the closure of the mines in the county. The Under 15 category fell by 36 percent, the 15 to 29 category by 31 percent, and the 30 to 44 category by 24 percent (See Table 25). The median age of the city's population increased from 34.0 years in 1990 to 41.8 years in 2000.

TABLE 25: 1990 TO 2000 CHALLIS POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	276	177	-99	-36%
15 to 29	189	131	-58	-31%
30 to 44	261	198	-63	-24%
45 to 59	151	177	26	17%
60 to 74	129	140	11	9%
75 and Older	67	86	19	28%
Total	1,073	909	-164	-15%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.2.2 Race and Hispanic Origin

The population of Challis was 97 percent White in the 2000 Census, a figure that stayed consistent from the 1990 Census. The Hispanic origin population more than doubled from 1990 to 2000, from 17 to 35 persons.

5.5.2.3 Housing Units and Households

The total number of housing units in Challis increased slightly from 1990 to 2000, from 493 to 525, a six percent increase, but the number of occupied housing units fell by two percent, from 417 to 410. Owner-occupied units increased by eight percent, from 264 to 284, but occupied rental units declined by 18 percent, from 153 to 126.

5.5.2.4 Employment and Wages

The largest employers in Challis are government-related. As of 2003, the school district employs 108 workers, the US Forest Service employs 90, and the county government has 44 workers. Although mining is decreasing in importance in the county, the remaining jobs pay well with average annual wages in 2003 at $45,676. Average annual wages for government employees was $29,111, whereas the leisure and hospitality industry was $13,599.

5.5.2.5 Income

Most income categories showed declines between 1990 and 2000. The two lowest income brackets, Under $10,000 and $10,000 to $20,000, fell by 17 percent and 24 percent, respectively. The $20,000 to $30,000 category increased by 34 percent, from 47 households to 63, reflecting the number of persons moving into government-related jobs. The next higher bracket, $30,000 to $40,000, showed a decline of 21 percent, losing 17 households, and the $40,000 to $50,000 bracket fell by 36 percent, with a loss of 25 households (See Table 26). Unemployment in the county overall remains relatively high, at 7.1 percent in 2000, 7.6 percent in 2001, and 8.3 percent in 2002, above both the state and national rate. Per capita income in Challis in 2000 was $15,803.

TABLE 26: 1990 TO 2000 CHALLIS HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	76	63	-13	-17%
$10,000 to $20,000	96	75	-21	-22%
$20,000 to $30,000	47	63	16	34%
$30,000 to $40,000	82	65	-17	-21%
$40,000 to $50,000	70	45	-25	-36%
$50,000 to $60,000	27	30	3	11%
$60,000 to $75,000	16	31	15	94%
$75,000 to $100,000	5	24	19	-
$100,000 to $150,000	5	4	-1	-20%
Over $150,000	3	1	2	-67%
Total	427	401	-26	-6%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.2.6 Transportation

Nearly two-thirds of Challis residents in 2000 reported driving to work alone and 26 percent reported carpooling (See Table 27). More than half the workers, 56 percent, live within ten minutes of their work site; 15 percent report a drive of 10 to 30 minutes and another 15 percent drive 30 to 60 minutes to commute to work.

TABLE 27: 2000 CHALLIS TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	230	63%
Carpooled	94	26%
Other	44	11%
Commute Time		
Under 10 Minutes	206	56%
10 to 30 Minutes	57	15%
30 to 60 Minutes	54	15%
Over 60 Minutes	51	14%

5.5.3 Dubois

Dubois is located on the I-15 corridor at the junction of I 15 and SH 22. As the county seat, Dubois is the administrative and government service center for Clark County. It is Clark County's only urban area, recognizing that one other small community, Spencer, had a population of 38 in 2000.

5.5.3.1 Population

The population of Dubois grew by 54 percent from 1990 to 2000; however with the city's small population overall, the percentage of growth is somewhat overstated. The number of persons in the town grew from 420 in 1990 by 227, to 647 in 2000 (See Table 28). Growth was highest in the three youngest age categories: the 30 to 44 population grew by 59 percent, the 15 to 29 category more than doubled, from 68 to 141 persons, and the Under 15 classification grew 70 percent, from 109 to 185. The median age in Dubois in 1990 was 35.4 years, dropping to 29.8 years in 2000.

TABLE 28: 1990 TO 2000 DUBOIS POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	109	185	76	70%
15 to 29	68	141	73	107%
30 to 44	85	135	50	59%
45 to 59	83	95	12	14%
60 to 74	54	65	11	20%
75 and Older	21	26	5	24%
Total	420	647	227	54%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.3.2 Race and Hispanic Origin

A significant portion of the population growth of Dubois from 1990 to 2000 is attributed to the increased number of persons of Hispanic origin in the city. The White population was 401 in 1990, increasing by 52 to 453 in 2000 while the population of Hispanic origin went from 17 in 1990 to 256 in 2000.

5.5.3.3 Housing Units and Households

The number of housing units in the city increased 20 percent from 1990 to 2000, from 205 to 245. Owner-occupied housing units increased from 118 to 154, a 31 percent increase, and the number of rental units increased by 46 percent, from 41 to 60. The number of vacant housing units declined 33 percent, from 46 to 31.

5.5.3.4 Employment and Wages

The largest employer in Dubois is Larson Farms, a farming and agricultural processing organization employing 293 persons in 2002. The next largest employer is the government, consisting of federal, county, and school district employment and providing 186 jobs. Wholesale and retail trade provided 72 jobs. The unemployment rate for the county in 2000 was 4.8 percent, dropping to 4.3 percent in 2001. Wage rate data for employment specific to Dubois is not available; the average monthly wage for Clark County in 1999 was $1,734.

5.5.3.5 Income

The largest increase in households from 1990 to 2000 came in the lowest income category, Under $10,000, which increased by 65 percent, from 17 to 28. The second largest increase was in the $40,000 to $50,000 category, which increased by 52 percent (See Table 29). The $10,000 to $20,000 category showed a 23 percent decrease in households, from 47 to 36. From 1990 to 2000, per capita income in Dubois showed a slight decrease of four percent from $10,418 to $10,389 which is the second lowest of the six cities in the study area.

TABLE 29: 1990 TO 2000 DUBOIS HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	17	28	11	65%
$10,000 to $20,000	47	36	-11	-23%
$20,000 to $30,000	36	43	7	19%
$30,000 to $40,000	37	42	5	14%
$40,000 to $50,000	27	41	14	52%
$50,000 to $60,000	3	9	6	-
$60,000 to $75,000	5	7	2	40%
$75,000 to $100,000	0	3	3	-
$100,000 to $150,000	0	1	1	-
Over $150,000	0	0	0	-
Total	172	210	38	22%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.3.6 Transportation

Dubois residents mostly drove alone to work, with 71 percent reporting driving alone and 20 percent carpooling. Forty-two percent live less than 10 minutes from their workplace and another 42 percent live between 10 and 30 minutes from work (See Table 30).

TABLE 30: 2000 DUBOIS TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	187	71%
Carpooled	53	20%
Other	23	9%
Commute Time		
Under 10 Minutes	111	42%
10 to 30 Minutes	109	42%
30 to 60 Minutes	22	8%
Over 60 Minutes	21	8%

5.5.4 Mackay

Mackay is in the southeast portion of Custer County, on US 93, and serves as a commercial center for the surrounding farm and ranching areas.

5.5.4.1 Population

Mackay demonstrated a population loss from 1990 to 2000 of one percent, dropping from 574 in 1990 to 566 residents in 2000; the decline continued, dropping to 546 in 2002. The largest decline came in the Under 15 category, dropping 28 percent, from 134 to 96 persons. The 30 to 44 category, generally the category of young families, also declined, from 137 to 107 persons, a drop of 22 percent (See Table 31). The older population, in the 45 to 59 category, increased by 57 percent and the 60 to 74 category grew by 15 percent. Median age in Mackay increased from 37.4 years in 1990 to 44.3 years in 2000; the 44.3 median age figure is the highest for any city or county in the study area.

TABLE 31: 1990 TO 2000 MACKAY POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	134	96	-38	-28%
15 to 29	83	85	2	2%
30 to 44	137	107	-30	-22%
45 to 59	81	127	46	57%
60 to 74	84	97	13	15%
75 and Older	55	54	-1	-2%
Total	574	566	-8	-1%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.4.2 Race and Hispanic Origin

The number of White residents in Mackay declined from 569 in 1990 to 558 in 2000, a two percent drop. Persons of Hispanic origin increased slightly in numbers, from 3 in 1990 to 13 in 2000.

5.5.4.3 Housing Units and Households

The number of housing units in Mackay increased slightly from 342 in 1990 to 353 in 2000, a three percent increase. The number of owner-occupied housing units increased 11 percent, from 174 to 196, and the number of rental units went from 56 to 65, a 14 percent increase. Vacant units declined 22 percent, from 122 in 1990 to 92 in 2000. The housing units occupied seasonally also declined, from 66 to 53, or 25 percent.

5.5.4.4 Employment and Wages

Most non-farm workers in Mackay are employed in government-related jobs with the school district (the largest single employer with 43 employees), the US Forest Service (15), and county or local government; 29 residents report working at INL. The average annual wages in the county for government employees was $29,111 in 2003; agriculture workers average annual wages were $23,856; and average annual wages for workers in the health and educational services industry was $9,486.

5.5.4.5 Income

The number of households in the $20,000 to $30,000 and $30,000 to $40,000 classifications both increased in Mackay from 1990 to 2000, reflecting the number of persons in government-related positions. The number of households in the two lowest-paying categories declined, by 39 percent and two percent, respectively (See Table 32). Households in the $50,000 to $60,000 category declined by 18 percent, reflecting the decline of the mining industry in the county. Per capita income in Mackay went from $9,146 in 1990 to $14,237 in 2000, a 56 percent increase.

TABLE 32: 1990 TO 2000 MACKAY HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	87	53	-34	-39%
$10,000 to $20,000	55	54	-1	-2%
$20,000 to $30,000	42	52	10	24%
$30,000 to $40,000	21	34	13	62%
$40,000 to $50,000	11	33	22	-
$50,000 to $60,000	11	9	-2	-18%
$60,000 to $75,000	4	17	13	-
$75,000 to $100,000	2	14	12	-
$100,000 to $150,000	0	5	5	-
Over $150,000	2	0	-2	-
Total	235	271	36	15%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.4.6 Transportation

Nearly four out of five (78 percent) of Mackay residents report driving to work alone; 12 percent carpooled in 2000 (See Table 33). More than half live within ten minutes of their workplace and over 20 percent commute more than one hour to work, reflecting the population employed at INL in either the service or construction industries.

TABLE 33: 2000 MACKAY TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	169	78%
Carpooled	26	12%
Other	23	10%
Commute Time		
Under 10 Minutes	119	55%
10 to 30 Minutes	25	11%
30 to 60 Minutes	27	12%
Over 60 Minutes	47	22%

5.5.5 Rexburg

Rexburg is the population center and county seat of Madison County. It is undergoing dramatic growth with the transition of Ricks College from a two year college to a four year university - Brigham Young University-Idaho (BYU-I). Rexburg is 20 miles east of I 15 on US 20, a major transportation corridor to Yellowstone, Island Park, the Grand Tetons, and Jackson Hole.

5.5.5.1 Population

Rexburg showed a **21 percent** increase in population from 1990 to 2000, the highest percentage population growth of any city or county in the study area. The 15 to 29 age category grew 31 percent, from 8,491 to 11,150, showing the effect of the increasing student population (See Table 34). Two other age categories, 45 to 59 and 75 and Older, showed 32 percent growth rates. The young population also shows up in the City's median age: 19.9 years in 1990 and 20.3 years in 2000. It is the lowest median age of any city or county in the study area and about half the media age level of the other five cities.

TABLE 34: 1990 TO 2000 REXBURG POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	2,833	2,587	-246	-9%
15 to 29	8,491	11,150	2,659	31%
30 to 44	1,301	1,370	69	5%
45 to 59	798	1,050	252	32%
60 to 74	533	644	111	21%
75 and Older	346	456	110	32%
Total	14,302	17,257	2,955	21%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.5.2 Race and Hispanic Origin

Rexburg's population in 2000 was 95 percent White with a growth rate of 20 percent from 1990 which parallels the city's overall growth trend. The city showed a 78 percent decline in its Asian population, from 219 persons in 1990 to 48 in 2000. The Hispanic origin population grew 58 percent, from 441 to 697.

5.5.5.3 Housing Units and Households

The growing student population is reflected in the city's housing statistics wherein the number of rental housing units increased 28 percent, from 2,036 to 2,603. Owner-occupied housing units also increased, from 1,382 to 1,671, a 21 percent increase.

5.5.5.4 Employment and Wages

The largest employer in the city is BYU-Idaho, with 1,122 workers in 2002. Artco, a printing firm, employed 503 persons and the Madison County School District had 452 employees. Two food processors, Basic American Foods and High Country Potato, employed 264 and 105 persons respectively. Call centers are an increasing presence in Rexburg, relying on the large population of bi-lingual students for labor. Average annual wages for education and health services in 2002 was $32,117, followed by government at all levels (federal, state, county, and city) at $23,285. Manufacturing earned $23,397 and Trade, which includes the food processing industry, averaged $19,802 annually.

5.5.5.5 Income

A strong manufacturing, food processing, and educational economic base raised household income from 1990 to 2000 in Rexburg. The number of households earning between $40,000 and $50,000 more than doubled, from 186 to 390 (See Table 35). The $30,000 to $40,000 category increased 68 percent and the $60,000 to $75,000 category increased 58 percent. However, the large student population, including students who may not work, work part-time, or work at low-wage service jobs, pushed the city's per capita income down to $9,173 in 2000, the lowest figure in the study area.

TABLE 35: 1990 TO 2000 REXBURG HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	628	524	-104	-17%
$10,000 to $20,000	1,166	1,026	-140	-12%
$20,000 to $30,000	644	768	124	19%
$30,000 to $40,000	373	628	255	68%
$40,000 to $50,000	186	390	204	110%
$50,000 to $60,000	114	296	182	-
$60,000 to $75,000	165	261	96	58%
$75,000 to $100,000	98	202	104	106%
$100,000 to $150,000	39	103	64	-
Over $150,000	13	56	43	-
Total	3,426	4,254	828	24%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.5.6 Transportation

The percentage of persons who drive alone or carpool to work in Rexburg is lower than in other cities and counties in the study area and the percentage of those using other means – walking, bicycling—is higher, again reflecting the character of the workforce and number of students included (See Table 35). More than half the workforce (55 percent) is less than 10 minutes from their work site and very few are more than 30 minutes away.

TABLE 36: 2000 REXBURG TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	4,102	61%
Carpooled	765	11%
Other	1,883	28%
Commute Time		
Under 10 Minutes	3,690	55%
10 to 30 Minutes	2,342	34%
30 to 60 Minutes	576	9%
Over 60 Minutes	142	2%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.6 Salmon

Salmon is located at the junction of US 93 and SH 28, a major corridor for north-south traffic into Montana and tourists heading for the Salmon River recreation and wilderness areas. Being the county seat of Lemhi County, Salmon is the governmental, administrative, and economic center for the surrounding area.

5.5.6.1 Population

Salmon's population grew by six percent from 1990 to 2000, from 2,941 to 3,122, declining to 3,022 in 2002. Lemhi County's population peaked in 1997 at 8,100 persons and has dropped as the mining industry declines. Salmon's younger population reflects the decline as young persons and families leave the area in search of economic opportunities. The Under 15 age category declined one percent between 1990 and 2000; the 15 to 29 category increased by only nine persons, and the 30 to 44 category dropped by three percent (See Table 37). The older population, that in the 45 to 59 category, increased by 41 percent. Salmon's median age in 1990 was 36.9 years, increasing to 39.9 years in 2000. Both the Salmon and Lemhi County median age figures are among the highest in the study area.

TABLE 37: 1990 TO 2000 SALMON POPULATION CHANGE

Age Group	1990 Population	2000 Population	# Change	% Change
Under 15	689	679	-10	-1%
15 to 29	498	507	9	2%
30 to 44	616	598	-18	-3%
45 to 59	459	645	186	41%
60 to 74	434	384	-50	-12%
75 and Older	245	309	64	26%
Total	2,941	3,122	181	6%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.6.2 Race and Hispanic Origin

The White population in Salmon increased by four percent from 2,901 to 3,021 in the study decade; the Hispanic origin population increased 45 percent from 47 to 68 persons.

5.5.6.3 Housing Units and Households

The number of housing units increased in the city, from 1,469 in 1990 to 1,576 in 2000, a seven percent increase. Owner-occupied housing units increased eight percent, from 847 to 911 and rental-housing units increased 11 percent, from 413 to 458.

5.5.6.4 Employment and Wages

The government, at the federal, state, or local level, employs nearly 40 percent of the workforce in Salmon and Lemhi County. Average annual wages for government workers in 2003 was $31,140. Among the larger non-government employers in Salmon are the QB Corporation, which manufactures laminated wood beams and employs 84 persons, and the hospital which has 75 employees. Average annual wages in the health and education services in 2003 was $14,624. The city is putting new emphasis on fostering its tourism industry, especially with the recent Lewis and Clark Expedition celebration. Average annual wages in the leisure and hospitality industry in 2003 was $9,673.

5.5.6.5 Income

Salmon saw a sharp household decline in the three lowest income categories from 1990 to 2000 (See Table 38). The Under $10,000 classification dropped 38 percent, the $20,000 to $30,000 category is down 32 percent, and the $10,000 to $20,000 category dropped 11 percent. The $30,000 to $40,000 category, reflecting the number of persons employed by the government at various levels, rose by 74 percent, from 136 to 237 jobs. Per capita income in Salmon increased from $9,049 in 1990 to $15,749 in 2000.

TABLE 38: 1990 TO 2000 SALMON HOUSEHOLD INCOME DISTRIBUTION

Income Range	1990	2000	# Change	% Change
Under $10,000	328	205	-123	-38%
$10,000 to $20,000	383	342	-41	-11%
$20,000 to $30,000	258	176	-82	-32%
$30,000 to $40,000	136	237	101	74%
$40,000 to $50,000	72	118	46	64%
$50,000 to $60,000	45	147	102	-
$60,000 to $75,000	49	48	-1	-2%
$75,000 to $100,000	0	28	28	-
$100,000 to $150,000	0	23	23	-
Over $150,000	0	22	22	-
Total	1,271	1,346	75	6%

Sources: Intermountain Demographics, U.S. Census Bureau

5.5.6.6 Transportation

In 2000, 78 percent of Salmon residents reported driving alone to work, with 14 percent carpooling (See Table 39). Sixty-one percent had a drive of ten minutes or less to their workplace and 29 percent had a commute time of between 10 and 30 minutes.

TABLE 39: 2000 SALMON TRANSPORTATION CHARACTERISTICS

Travel Mode	# Persons	% Total
Drove Alone	892	78%
Carpooled	162	14%
Other	92	8%
Commute Time		
Under 10 Minutes	700	61%
10 to 30 Minutes	334	29%
30 to 60 Minutes	47	4%
Over 60 Minutes	65	6%

Sources: Intermountain Demographics, U.S. Census Bureau

5.6 DEMOGRAPHIC FORECASTS

A series of forecasts were prepared for the community profile, including the population, the number of households, and total employment for each county and node in the corridor. County forecasts were combined to produce forecasts for the entire region which, in turn, was used as one variable in forecasting overall future levels of traffic volume, and to pinpoint specific areas of increasing traffic in the corridor.

5.6.1 Regional Forecasts

An overall population growth rate of about 50 percent for the six county study region is forecast for the period of 2000 to 2030 (See Table 40). By 2030, nearly 95,000 persons will live in approximately 31,000 housing units in the six county region. Households are forecast to increase at a slightly higher rate of 58 percent for the 30 year forecast period. Employment is expected to increase from slightly more than 37,100 in 2000 to more than 54, 200 by 2030, a 46 percent gain. Forecasts range from a low in Butte County, where population, household, and employment gains are minimal, to Rexburg where population, households, and employment are expected to almost double.

TABLE 40: 2000 TO 2030 REGIONAL POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	62,691	19,504	37,148
2005	67,074	21,195	40,283
2010	73,583	23,448	43,199
2015	79,334	25,427	45,719
2020	84,497	27,348	48,409
2025	90,366	29,433	51,235
2030	94,388	30,901	54,229
# Gain	31,697	11,397	17,081
% Gain	51 %	58%	46%

Source: Intermountain Demographics

5.6.2 County Forecasts

Population, household, and employment forecasts were first prepared for each of the six counties in the region. In general, the county forecasts call for slow growth in Butte, Clark, and Custer counties (the more isolated, sparsely settled counties in the region), for moderate growth (depending on migration trends) in Lemhi County, and for higher levels of growth in Jefferson and Madison counties (the more developed areas of the region).

5.6.3 Nodal Forecasts

The final step in the forecasting process was to prepare population, household, and employment figures for the six largest cities (or nodes) in the region. In general, the forecast showed that the smaller, more isolated cities (Arco, Challis, Dubois, and Mackay) will continue to have the lowest numerical and percentage changes. Even though it is relatively isolated, Salmon's population, households, and employment will all increase by more than one-half. Rexburg, the largest and fastest growing city in the region, will continue to post the greatest gains in the forecast categories.

5.6.3.1 Arco

Arco's projected population growth rate for the coming 30 years is 17 percent, lowest of the six cities in the study (See Table 41) when the population will reach about 1,200 persons at the end of the forecast period, gaining slightly less than 200 persons. The number of households will reach nearly 600 (increasing by 40 percent) while the city's employment will reach 676 employees, a slight increase over its 2000 level of employment (a projected increase of about seven percent). This falls in line with Butte County trends.

TABLE 41: 2000 TO 2030 ARCO POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	1,026	427	632
2005	1,057	455	638
2010	1,092	489	646
2015	1.124	524	654
2020	1,152	558	662
2025	1,176	582	669
2030	1,204	596	676
# Gain	178	169	44
% Gain	17%	40%	7%

Source: Intermountain Demographics

5.6.3.2 Challis

The projected growth rate for Challis through the next 30 years is 21 percent, with the population expected to increases by about 200 persons to reach a total of nearly 1,100 by 2030 (See Table 42). The number of households will increase at a higher rate of 40 percent and reach nearly 600 households by 2030, with employment growing by 18 percent, increasing from 1,100 employees in 2000 to about 1,300 by 2030. This is reflective of the trends for Custer County as well.

TABLE 42: 2000 TO 2030 CHALLIS POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	909	410	1,108
2005	949	444	1,106
2010	985	473	1,134
2015	1,016	501	1,170
2020	1,046	530	1,212
2025	1,073	557	1,258
2030	1,099	573	1,304
# Gain	190	163	196
% Gain	21%	40%	18%

Source: Intermountain Demographics

5.6.3.3 Dubois

Dubois is projected to grow by one-third and reach a total of 863 residents by 2030 (See Table 43), with an expected 345 households, an increase of about 60 percent since 2000. The city's employment total will be about 350 employees, a gain of one-fourth from 2000 to 2030. These trends reflect those of Clark County.

TABLE 43: 2000 TO 2030 DUBOIS POPULATIONS, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	647	214	284
05	680	240	300
2010	725	265	311
2015	756	289	320
2020	794	311	331
2025	825	329	344
2030	863	345	351
# Gain	216	131	67
% Gain	33%	61%	24%

Source: Intermountain Demographics

5.6.3.4 Mackay

Growth in Mackay for the period through 2030 is projected at 20 percent, the second lowest figure in the six cities in the study area (See Table 44) with about 680 persons. Households are expected to increase by 43 percent and reach 374 households. Total employment will be 740 employees, an 18 percent gain from 2000.

TABLE 44: 2000 TO 2030 MACKAY POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	566	261	629
2005	588	290	628
2010	610	309	644
2015	629	327	664
2020	647	346	688
2025	664	363	714
2030	681	374	740
# Gain	115	113	111
% Gain	20%	43%	18%

Source: Intermountain Demographics

5.6.3.5 Rexburg

Growth projections for Rexburg outstrip the projections for any of the other cities or counties in the study region. The city's population is expected to grow 94 percent by 2030 (See Table 45) with increases from 17,257 in 2000 to 33,510 by 2030, gaining 16,253 residents (including student population). The number of households more than doubled to almost 9,000, gaining more than 4,600 households in the 30 year period. Employment increases from about 14,000 employees in 2000 to more than 27,000 by 2030, nearly a 13,000 numerical increase or a 92 percent gain.

TABLE 45: 2000 TO 2030 REXBURG POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	17,257	4,274	14,097
2005	24,569	6,244	16,594
2010	25,569	6,514	18,848
2015	27,369	7,028	20,715
2020	29,629	7,604	22,702
2025	31,318	8,244	24,822
2030	33,510	8,929	27,096
# Gain	16,253	4,655	12,999
% Gain	94%	109%	92%

Source: Intermountain Demographics, City of Rexburg

5.6.3.6 Salmon

Salmon will post the second largest numerical gains in population, households, and employment of all six cities in the region. The population is forecasted to increase by more than 1,600 persons to reach almost 4,800 by 2030 (See Table 46), a gain of greater than 50 percent. Households also increase by more than one-half to reach a total of more than 2,100 households while employment gains 1,770 employees (a gain of 46 percent) increasing to about 5,600.

TABLE 46: 2000 TO 2030 SALMON POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECAST

Year	Population	Households	Employment
2000	3,122	1,369	3,828
2005	3,377	1,482	4,032
2010	3,636	1,597	4,280
2015	3,903	1,724	4,598
2020	4,189	1,854	4,902
2025	4,481	1,987	5,221
2030	4,777	2,128	5,598
# Gain	1,655	759	1,770
% Gain	53%	55%	46%

Source: Intermountain Demographics

5.7 ENVIRONMENTAL SCAN

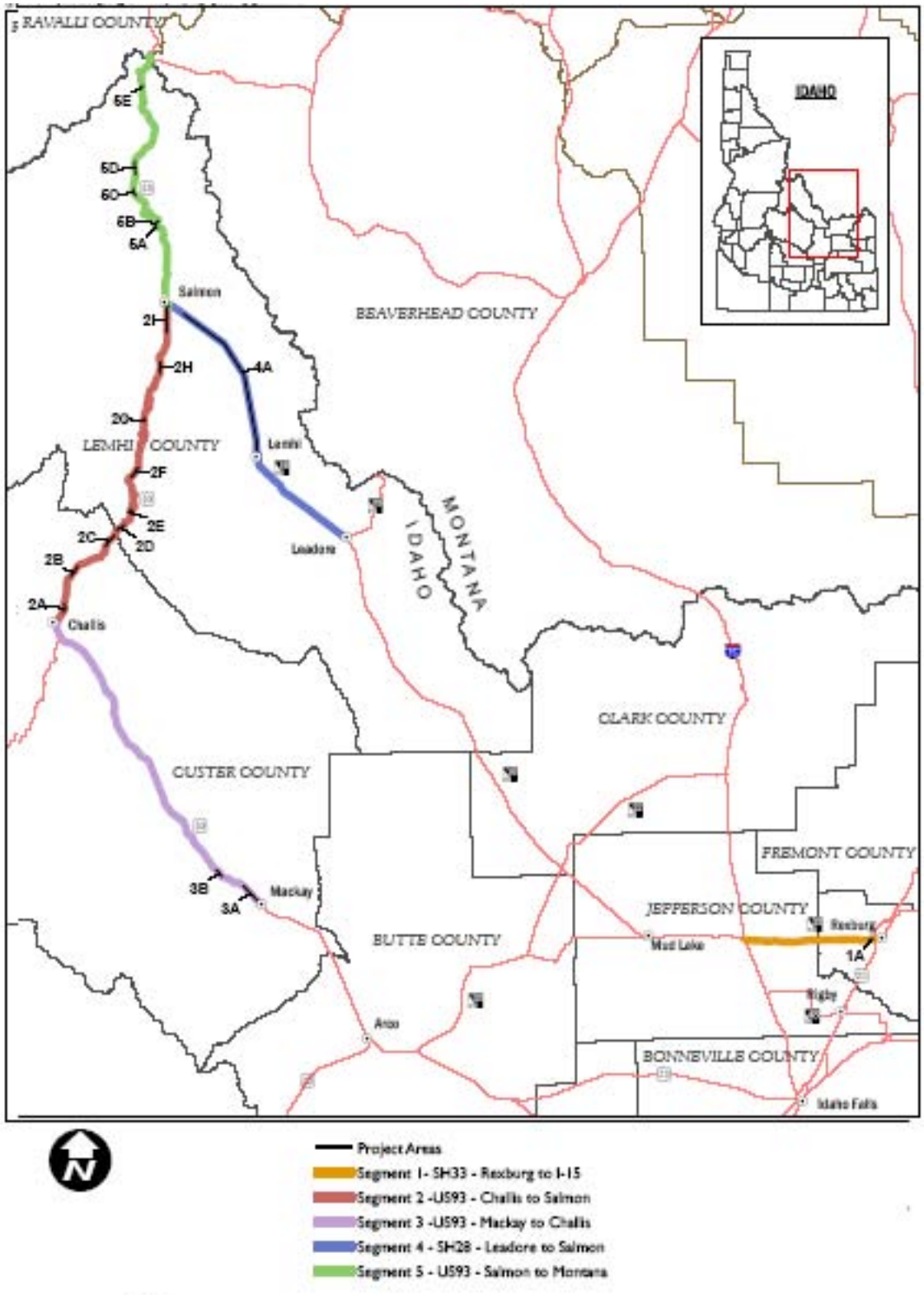
The purpose of the environmental scan is to identify critical environmental planning factors, including biological, physical, and cultural issues which could affect the analysis and development of improvement options for the EICLP. For this portion of the study, the highway corridor is broken into five segments, with subsections (projects) identifying specific areas within each (Note that this *five* segment breakdown is for this section only, the main body of this report refers to 4 segments). Refer to chapter 7 for a complete listing of projects referenced by highway and milepost. The segments are divided as follows:

FIGURE 13: ENVIRONMENTAL SCAN SEGMENTS

TABLE 1.1
US 93, SH 33-28 EAST CENTRAL IDAHO CORRIDOR LOOP
SEGMENT AND PROJECT LOCATIONS

Segment	Description	Mileposts	Project	Description	Mileposts
Segment 1	SH 33 from Rexburg west to Interstate 15 (I 15)	62 – 78	1A	Realign curves	77.0 – 78.0
Segment 2	US 93 from Challis to Salmon	247 – 305	2A	Curve realignment	249.5
			2B	Passing lanes	254.0 – 256.0
			2C	Passing lanes	261.5 – 263.7
			2D	Passing lanes	264.5 – 266.0
			2E	Passing lanes	268.0 – 269.0
			2F	Passing lanes	275.1 – 277.0
			2G	Pull out	285.3 – 286.0
			2H	Passing lanes	294.2 – 296.0
			2I	Intersection with SH-28; widen to 4 lanes.	300.5 – 304.6
Segment 3	US 93 from Mackay to Challis	110 – 247	3A	Bike path	109.5 – 113.2
			3B	Curve realignment	116.5 – 118.0
Segment 4	SH 28 from Leadore to Salmon	90 – 135	4A	Clear brush to right-of-way line	109.0 – 133.0
Segment 5	US 93 from Salmon to the Montana state line	305 – 350	5A	Pullout	317.0 – 317.4
			5B	Pullout	317.75 – 318.4
			5C	Climbing lane	325.65 – 327
			5D	Passing lanes	329.0 – 331.0
			5E	Construct chain-up area	343.7 - 344.0

FIGURE 14: MAP OF ENVIRONMENTAL SCAN SEGMENTS



5.7.1 Segment 1: SH 33 From Rexburg West To I 15

This 16 mile long portion of the corridor extends west from the town of Rexburg for approximately six miles to milepost 73 and passes through primarily agricultural lands and wetland meadows after crossing the Henry's Fork of the Snake River. From this point, the corridor continues west through the expansive Snake River Plain, a high volcanic plateau built up of a series of lava flows over the last several million years. A sagebrush-bunchgrass dominated plant community dotted with an occasional juniper patch covers these basalt lava flows. Laying within the Intermountain Semidesert Province Ecoregion the topography is relatively flat and rises approximately thirty-feet over the course of this segment to I 15.

LAND OWNERSHIP PROJECT SUMMARY

A review of land ownership maps and acreage calculations for this segment indicate that 68 percent of the lands within the corridor study area are public land, under the jurisdiction of the Idaho Falls District of the BLM. Private land adjoining the roadway amounts to 31 percent of the total. All lands within and adjacent to Project Area 1A are privately owned.

GEOLOGY AND SOILS PROJECT SUMMARY

Prime farmland adjoins the south side of the highway from milepost 77.1 to 77.4. Prime farmland (if irrigated) adjoins the remainder of the project area. No mines or geologic hazards are located within the project area.

WATER RESOURCES PROJECT SUMMARY

The Teton River and its floodplain adjoin the project from milepost 77.0 to 78.0. Forty wells have been identified within the project area; 33 are domestic wells and seven wells are not identified as to their type.

WETLANDS PROJECT SUMMARY

Wetlands that adjoin this segment area include along mileposts 77.0 to 77.1 and mileposts 77.4 to 77.6 and are restricted to the north side of the highway, consisting primarily of palustrine emergent wetlands associated with the Teton River.

NOISE PROJECT SUMMARY

Potential noise receptors within the project area include residences and businesses.

HAZARDOUS MATERIALS PROJECT SUMMARY

Hazardous material sites identified in the project area include an auto salvage yard at milepost 77.1 and Alpine Propane at milepost 78.0.

VEGETATION PROJECT SUMMARY

The federally-listed T&E plant species Ute Ladies'-tresses may be present in the project area and although its occurrence has not been documented, its habitat is present. Special status plants have the potential to be located in the project area; however, no element occurrences have been reported and no rare plant communities were observed during the field survey. Noxious weeds including Canada thistle, purple loostrife, and Russian thistle were observed in the project area. No-spray zones would likely include wetlands associated with the Teton River. No concerns for brush clearing have been identified in the project area.

WILDLIFE PROJECT SUMMARY

T&E species with the potential to occur in the project area include the bald eagle, yellow-billed cuckoo, and gray wolf. The Teton River bald eagle wintering area is within 0.25 miles of the project area near milepost 77.0. An element occurrence record for a yellow-billed cuckoo nesting area is recorded from milepost 72 to 73.3. The project area is within the Greater

Yellowstone Wolf Recovery Area; however, there is no documented wolf activity in the project vicinity. The Teton River is identified as a wintering area for trumpeter swan and habitat is present for other special status wildlife species. Crucial elk winter range has not been identified within or adjacent to the project area and the project area has not been identified as a high-risk area for wildlife related vehicle accidents.

FISHERIES PROJECT SUMMARY

No T&E fish species are likely to occur within the area although the special status Yellowstone cutthroat trout are known to occur in the Teton River.

HISTORICAL RESOURCES PROJECT SUMMARY

Two potentially historic sites, a barn and a homestead, are present in the project area.

ARCHAEOLOGICAL RESOURCES PROJECT SUMMARY

Archaeological resources have the potential to be located in the project area; however, at the time of the reconnaissance, no sites were observed.

TRADITIONAL RESOURCES PROJECT SUMMARY

Traditional cultural resources have the potential to be located in the project area; however, during the reconnaissance, no sites were observed and to date there has been no government-to-government consultation with Native American Tribal Governments.

5.7.2 Segment 2: US 93 From Salmon To Challis

This segment extends northward for approximately 58 miles, dropping from Challis at an elevation of 5,171 feet above mean sea level to Salmon at 3,930 feet (a total elevation loss of 1,241 feet). The roadway follows the Salmon River for the entire length of the segment, passing first through the Round Valley, an area consisting mostly of agricultural lands and wetland meadows. The highway then enters the narrow canyons of the Salmon River, including Cronks Canyon north of the town of Ellis, where the Pahsimeroi River joins the Salmon. The highway then continues through the rugged Salmon-Challis National Forest with the Salmon River Mountains to the west and the Lemhi Range to the east. The landscape opens up to agricultural and wet meadowlands past Williams Creek to the town of Salmon. The majority of rock outcrops along this route are volcanic rocks that have been eroded, exposing the older Pre-Cambrian formations visible in the narrow canyons.

LAND OWNERSHIP PROJECT SUMMARY

Project Areas 2A and 2I: All lands within and adjacent to these project areas are privately owned.

GEOLOGY AND SOILS PROJECT SUMMARY

Project Areas 2B, 2C, 2D, 2E, 2F, 2G, and 2H: All lands within and adjacent to these project areas are a mixture of private land and public land administered by the BLM.

Project Area 2A: Prime farmland (if irrigated) has been identified from milepost 249.4 to 250.0. No mines have been identified within the project area. No faults have been identified through this project but the area has experienced magnitude 4.5-4.9 / intensity VI earthquakes. Two soil map units within the project area have poor road suitability for flooding, wetness, and strength.

Project Area 2B: Neither prime farmland nor mines were identified within or adjacent to this project area. No faults have been identified through this project but the area has experienced magnitude 4.5-4.9 / intensity VI earthquakes. Three soil map units within the project area have poor road suitability for flooding, slope and wetness.

Project Area 2C: Prime farmland (if irrigated) has been identified along portions of Project Area 2C from milepost 261.5 to 262.4 and milepost 263.2 to 263.7. No mines have been identified in this project area. No faults or earthquake risk were identified for this project. A severity 3 rock-fall area is located from milepost 263.3 to 263.7.

Project Area 2D: Neither prime farmland nor mines have been identified within or adjacent to this project area. A normal fault line crosses the highway near Project Area 2D between milepost 264 and 265, but no earthquake risk was identified. A severity 3 rock-fall area is located from milepost 264.5 to 264.7. Two soil map units have poor road suitability for slope.

Project Area 2E: Neither prime farmland nor mines have been identified within or adjacent to this project area. No faults or earthquake risk were identified. No rock-fall areas adjoin Project Area 2E. One soil map unit (soil unit 2) has poor road suitability for flooding, wetness, and sandiness.

Project Area 2F: Neither prime farmland nor mines have been identified within or adjacent to this project area. No faults or earthquake risk were identified. A severity 2 rock-fall area is located between milepost 275.1 and 275.2. One soil map unit has poor road suitability for slope (soil unit 55).

Project Area 2G: Neither prime farmland nor mines have been identified within or adjacent to this project area. A thrust fault crosses between milepost 285 and 286, but no earthquake risk was identified. A severity 2 rock-fall area is located between milepost 285.3 and 285.3, but no unstable soils were identified.

Project Area 2H: Prime farmland was not identified in the project area. Two mines were identified and include the Ruth Group Uranium Mine, and the Mont-Ida Uranium Prospect. No faults or earthquake risk were identified. Severity 2 rock-fall areas have been identified between mileposts 294.3 and 294.7 and between mileposts 295.9 and 296. One soil map unit has a severe rating class for potential erosion hazard for roads (soil unit 183).

Project Area 2I: Neither prime farmland nor mines have been identified within or adjacent to this project area. No geologic hazards, faults or earthquake risk were identified.

WATER RESOURCES PROJECT SUMMARY

Project Areas 2A: The Salmon River is approximately one mile east of the project area. An unnamed, 1st order stream crosses under the corridor at milepost 249.4, 0.1 miles south of the project area. This project area is not within or adjacent to floodplains. Eight wells have been identified within the area; six domestic and two 'other' well types.

Project Area 2B: The US-93 corridor crosses Morgan Creek (3rd order stream) bridge from milepost 254.8 to 254.9 and crosses the Salmon River floodplain (within the Morgan Creek drainage) from milepost 254.7 to 255.0. Five wells have been identified within the vicinity; four domestic wells and one 'other' well type.

Project Area 2C: The Salmon River and its floodplain are immediately adjacent to the west side of US 93 at milepost 261.8 and from milepost 263.2 to 263.7. Ellis Creek and two unnamed creeks enter the Salmon River from the west, and an unnamed creek enters from the east crossing under US 93. US 93 crosses the Pahsimeroi River floodplain near its confluence with the Salmon River, south of the town of Ellis. Two domestic wells have been identified within the project area.

Project Area 2D: The Salmon River is immediately adjacent to the west side of US 93 from milepost 264.5 to 264.8, and at milepost 265.9 to 266.0. Dry Gulch and an unnamed drainage

enter the Salmon River from the west. The project area is adjacent to the Salmon River floodplain on the northwest side from milepost 264 to 265, and at mileposts 266 to 266.7. Two irrigation wells have been identified within the project area.

Project Area 2E: The Salmon River and/or its floodplain are immediately adjacent to the west side of US 93 for the entire project. Cow Creek enters the Salmon River from the east at milepost 268.4, and an unnamed drainage enters from the west at milepost 268.5. Three domestic wells have been identified within the project area.

Project Area 2F: The Salmon River is immediately adjacent to the west side of US 93 from milepost 275.1 to 276.4, and milepost 276.7 to 277.0. Ezra Creek enters the Salmon River from the west at milepost 275.9 and an unnamed drainage enters from the west at 277. The project area is adjacent to the Salmon River floodplain in three areas: milepost 274.6 to 275.5; milepost 276 to 276.4; and milepost 276.8 to 277.5, and is within the Salmon River floodplain from milepost 275.5 to 276. Two domestic wells have been identified within the project area.

Project Area 2G: The Salmon River is immediately adjacent to the west side of US 93 from milepost 285.3 to 286. The confluence of Lost and Waddington Creek enters the Salmon River from the east at milepost 285.7, and Rattlesnake Creek enters from the west at milepost 286. The project area is adjacent to the Salmon River floodplain on the west side from milepost 284.7 to 286. Six domestic wells have been identified within the project area.

Project Area 2H: The Salmon River is immediately adjacent to the west side of US 93 from milepost 294.2 to 294.5, milepost 295.0 to 295.5, and milepost 296.0. The Salmon River floodplain is adjacent to the project area from milepost 293.7 to 294.5, and from milepost 295.1 to 296.5, and is within the Salmon River floodplain near Ten Mile Creek at milepost 295. Ten Mile Creek flows into the Salmon River from the east at milepost 295, and an unnamed creek and Henry Creek enter from the west near milepost 294.8 and 295.8, respectively. Seven domestic wells have been identified within the project area.

Project Area 2I: The Salmon River is located approximately one mile west; an unnamed 2nd order stream crosses the corridor near milepost 302.3, and flows immediately adjacent to the corridor to milepost 302.8 before veering west. The project area crosses the Salmon River floodplain from milepost 304.2 to 304.3, and is adjacent to the floodplain from milepost 300 to 300.2. Wells identified within the project area include 118 domestic wells, one municipal well, two commercial wells, two irrigation wells, seven heat pump wells, and four 'other' well types.

WETLAND PROJECT SUMMARY

Within the project areas identified for this segment, 5.3 miles are in or adjacent to wetlands.

NOISE PROJECT SUMMARY

Project Areas 2A, 2B, 2C, 2D, 2E, 2F, 2G, and 2H: No sensitive noise receptors were identified in these project areas as they are within rural areas.

Project Area 2I: The northern portion of the project area is within the city limits of Salmon where a number of sensitive noise receptors exist, including: the Pioneer School, Salmon High School (near milepost 304.5), and several residences.

HAZARDOUS MATERIAL PROJECT SUMMARY

Project Areas 2A, 2B 2C, 2E, 2F, 2G, and 2H: There are no known hazardous material sites within the proposed project areas.

Project Area 2D: There is an old gas station in Ellis on the east side of the US 93 at milepost 264.5. It is unknown whether the tanks have been pulled, yet the project area would likely start outside of the town and thus the gas station would not be affected.

Project Area 2I: Potential hazardous material impacts associated with the project area include: Salmon Tractor Sales at milepost 303.5, Salmon River Propane at milepost 304.2, 93 Mini Mart at milepost 304.4, Semi-Stop/Sinclair gas station at milepost 304.4, and three businesses at the intersection of US 93 and SH 28 (Main Street): there is a Miracle Auto Body shop on the southeast corner; Salmon River Quick Stop on the northeast corner; and a Tiger Mart on the northwest corner.

VEGETATION PROJECT SUMMARY

Project Area 2A: No T&E plant species are expected to occur in the area although one special status element occurrence record of Lemhi milkvetch was identified. Noxious weeds observed in the project area included Canada thistle and Russian thistle. No-spray areas include water resource and wetland areas where these are present. No concerns for brush clearing have been identified in this project area.

Project Area 2B: No T&E plant species are expected to occur in the project area although special status element occurrences include four records of Challis milkvetch, and four records of wavy-leaf thelypody. Noxious weeds observed included Canada thistle and Russian thistle. No-spray areas include water resource and wetland areas where these are present. No concerns for brush clearing have been identified in this project area.

Project Area 2E: No T&E plant species are expected to occur in the project area although special status element occurrences include one record of Challis milkvetch. Noxious weeds observed included Canada thistle and Russian thistle. No-spray areas include water resource areas where these are present. No concerns for brush clearing have been identified in this project area.

Project Areas 2C, 2D, 2F, 2G, 2H, 2I: No T&E plant species are expected to occur in these project areas and no special status plant element occurrences have been recorded, but habitat for special status species exist in these project areas. Noxious weeds observed included Canada thistle and Russian thistle. No-spray areas include water resource and wetland areas where these are present. No concerns for brush clearing have been identified in these project areas.

WILDLIFE PROJECT SUMMARY

Project Area 2A: T&E species that may occur in the project area include the bald eagle, Canada lynx and gray wolf. A historic bald eagle nest site is located 2.25 miles north of the project area and a nesting territory is located 1.74 miles south. In addition, the Salmon River bald eagle wintering area is approximately one mile east. Habitat for lynx is present in the vicinity, and there are several element occurrence records within ten miles of the study area.

This project area is within the Central Idaho Wolf Recovery Area and special status species element occurrence records in the project area include a peregrine falcon territory located 1.09 miles to the east. Important range for big game wildlife and wildlife-related vehicle accidents are not a concern in this segment.

Project Area 2B**:** T&E species that may occur in Project Area 2B include the bald eagle, Canada lynx and gray wolf. A historic bald eagle nest site is located two miles south of the project area and the Salmon River bald eagle wintering area is one mile to the east. Habitat for lynx is present in the vicinity, and there are several element occurrence records within ten miles of the

Segment 2 study area. The project area is within the Central Idaho Wolf Recovery Area. Crucial elk winter range and summer and winter elk range exists on the west side of project from milepost 252 to 265. Wildlife-related vehicle accidents are not a concern in the area.

Project Area 2C, 2D, 2E, 2F and 2H: T&E species that may occur in Project Areas 2C, 2D, 2E, 2F, and 2H include the bald eagle, Canada lynx, and gray wolf. These project areas are immediately adjacent to the Salmon River bald eagle wintering area, and several bald eagles were observed roosting in the vicinity during the field reconnaissance survey. Habitat for lynx is present, and there are several element occurrence records within ten miles of the Segment 2 study area. The project area is within the Central Idaho Wolf Recovery Area. Crucial winter range for elk, and summer and winter range has been identified adjacent to both sides of the corridor through most of these project areas. Wildlife-related vehicle accidents are not a concern; however, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

Project Area 2G: T&E species that may occur in the Project Area include the bald eagle, Canada lynx, and gray wolf. The project area is immediately adjacent to the Salmon River bald eagle wintering area, and several bald eagles were observed roosting in the vicinity during the field reconnaissance survey. Lynx Habitat Linkage Areas (Lynx Links) have been identified on both sides of the project. In addition, one lynx element occurrence has been recorded approximately five miles north of the project. The project area is within the Central Idaho Wolf Recovery Area. Crucial winter range for elk, and summer and winter range has been identified adjacent to both sides of the project. Wildlife-related vehicle accidents are not a concern; however, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

Project Area 2I: T&E species that may occur in the area include the bald eagle, Canada lynx, and gray wolf. A bald eagle nest is located 0.3 miles from the project area and the Lemhi River bald eagle wintering area is 0.5 mile to the north. Habitat for lynx is present in the vicinity, and there are several element occurrence records within 10 miles of the project area. The project area is within the Central Idaho Wolf Recovery Area, and element occurrence records of special status species in the vicinity include a probable common grackle colonial breeding area (within 0.5 mile) and a peregrine falcon territory (1.09 miles west). Important range for big game wildlife is not a concern while there is a high concentration of wild animal related vehicle crashes; specifically, the area from milepost 299 north to Salmon. In addition, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

FISHERIES PROJECT SUMMARY

Project Area 2A: Water resources are not within or immediately adjacent to the project area.

Project Area 2B: T&E fish species found in the project area include: bull trout, Chinook salmon during the spring run; steelhead in Morgan Creek; sockeye salmon during the Snake River Run; bull trout, Chinook salmon during spring and summer runs; and steelhead within the Salmon River drainage. Special status fish species include Westslope cutthroat trout, cutthroat trout, and Pacific lamprey within the Salmon River drainage.

Project Areas 2C, 2D, 2E, 2F, 2G, and 2H: T&E fish species found in the project area include: Sockeye salmon within the Salmon River drainage during the Snake River Run; bull trout and steelhead within the main Salmon River throughout the year; and Chinook salmon within the main Salmon River during spring and summer runs. Special status fish species found in the

project area include: Westslope cutthroat trout, cutthroat trout, and Pacific lamprey all of which are found within the Salmon River drainage throughout the year.

Project Area 2I: The only identified water body within the project area is an unnamed 2nd order stream. This stream was identified as an irrigation canal during the field reconnaissance survey, and is unlikely to provide habitat for any fish species.

HISTORICAL RESOURCES PROJECT SUMMARY

Project Area 2A, 2E and 2G: One potentially historic homestead is present in each of these project areas.

Project Area 2B: Three potentially historic homesteads are present in the project area.

Project Area 2C: Two potentially historic homesteads are present in the project area.

Project Area 2D: One potentially historic homestead, a gas station and surrounding buildings are present in the project area.

Project Area 2F: One potentially historic homestead and an old military road are present in the project area.

***Project Area 2H*:** One potentially historic homestead and an old building currently used as an antique store are present in the project area.

Project Area 2I: One potentially historic homestead with a barn and several other structures are present in the project area.

ARCHAEOLOGICAL PROJECT SUMMARY

Project Area 2A through 2I: Archaeological resources have the potential to be located in the project area; however, at the time of our reconnaissance, no sites were observed.

TRADITIONAL CULTURAL RESOURCES PROJECT SUMMARY

Project Areas 2A through 2I: Traditional cultural resources have the potential to be located in the project area; however, during our reconnaissance, no sites were observed and to date there has been no government-to-government consultation with Native American Tribal Governments.

5.7.3 Segment 3: US 93 From Mackay To Challis

This segment extends northwesterly for approximately 55 miles from Mackay to Challis within Custer County, Idaho. From Mackay, the highway follows the Big Lost River Valley and climbs over 1,200 feet through the Thousand Springs Valley. On its approach to the Willow Creek summit at 7,161 feet above mean sea level (milepost 138.5), the highway is flanked by the Big Lost River Range's alluvial fans and then winds through Grand View Canyon, which consists of eroded limestone and dolomites. The highway drops nearly 2,000 feet in its decent into Challis in the Salmon River Valley.

LAND OWNERSHIP PROJECT SUMMARY

Project Areas 3A and 3B: All lands within and adjacent to the project areas are either privately owned (41 percent), or administered by the Idaho Falls District of the BLM (Challis Field Office).

GEOLOGY AND SOILS PROJECT SUMMARY

Project Area 3A: Neither prime farmland nor mines are located in this project area. Project Area 3A has experienced earthquakes with magnitudes 7.0 to 7.4. Two soil units have either potentially hazardous limitations or poor road suitability for flooding, wetness and strength (soil units 12 and 238).

Project Area 3B: Neither prime farmland nor mines are located in this project area. A thrust fault crosses the project area on a parallel oblique between milepost 117.5 and 118. This area has experienced earthquakes with magnitudes 7.0 to 7.4. One soil unit has severe erosion potential for slope/erodability (soil unit 202).

WATER RESOURCES PROJECT SUMMARY

Project Area 3A: Water resources in Project Area 3A study area include: Swauger Slough on the west from milepost 109.5 to 110; Big Lost River on the west from milepost 110 to 113; and, Mackay Reservoir on the west at milepost 113.1. In addition, two 1st order streams cross the project at milepost 112.7 and 113.1 and small unnamed ponds are located on both sides of the project from milepost 111.3 to 111.4. Project area 3A is immediately adjacent to the Big Lost River floodplain on the west side of the corridor from milepost 110.8 to 111.5. Wells in the project area include 26 domestic, one municipal, one irrigation, and two 'other' well types.

Project Area 3B: Project Area 3B for its entire length is within 0.5 mile east of the Big Lost River but is not within the 100-year floodplain. One domestic well is located in the project area.

WETLANDS PROJECT SUMMARY

Project Area 3A: Within Project Area 3A, 2.6 miles of US-93 are adjacent to wetlands or potential wetlands. These wetlands are characterized as palustrine emergent, scrub-shrub, and riverine wetlands associated with the Big Lost River and Sharp ditch, and occur from milepost 109.5 to 112.1.

Project Area 3B: No wetlands were identified adjacent to Project Area 3B.

NOISE PROJECT SUMMARY

Project Area 3A*:* The southern end of the project area is within the Mackay city limits. Potential noise receptors within the project area include residences.

Project Area 3B: The project area is within a rural area with no sensitive noise receptors identified.

HAZARDOUS MATERIALS PROJECT SUMMARY

Project Area 3A: There are no known hazardous material sites within the proposed project area.

Project Area 3B: In the town of Mackay there is one old gas station that still has a pump. It is unknown if the tanks were pulled.

VEGETATION PROJECT SUMMARY

Project Areas 3A and 3B:*:* No T&E species are expected to occur in Project Areas 3A or 3B. Element occurrence records for special status plant species identified in Segment 3 did not occur near these project areas. Special status plants were not observed during the field reconnaissance survey; however, habitat may be present. Noxious weeds were not observed during the field survey. No-spray areas include water resource and wetland areas where these are present. No concerns for brush clearing have been identified in this project area.

WILDLIFE PROJECT SUMMARY

Project Area 3A: T&E species that may occur in Project Area 3A include Canada lynx and gray wolf. Review of the Idaho CDC map of element occurrences indicates one record for Canada lynx within the project area from milepost 110.6 to 120.9. In addition, there are three sightings, and one unconfirmed specimen of Canada lynx within ten miles of the project. Crucial winter range for elk has been identified on west side of corridor from milepost 110 to 115. Wildlife-related vehicle accidents are not a concern in Project Area 3A.

Project Area 3B: T&E species that may occur in Project Area 3A include Canada lynx, and gray wolf. Review of the Idaho CDC map of element occurrences indicates one record for Canada lynx within the project area from milepost 110.6 to 120.9. In addition, there are three sightings, and one unconfirmed specimen within ten miles of the project. It is an important range for big game wildlife although wildlife related vehicle accidents are not a concern in Project Area 3B.

FISHERIES PROJECT SUMMARY

Project Area 3A and 3B: No T&E fish species are expected to occur in these project areas. Three special status fish species, Westslope cutthroat trout**,** cutthroat trout and Pacific lamprey, are known to occur within the Big Lost River drainage throughout the year. The Big Lost Mountain whitefish occurs in the project areas; however, this species is not currently protected.

HISTORICAL RESOURCES PROJECT SUMMARY

Project Area 3A: The town of Mackay has several historic features; an old gas station which still has a pump, the 12th J.C. Penny's store ever built, old Forest Service housing, and a lumber yard. North of Mackay within the project area there are two old houses and two homesteads - both are on either side of the roadway - and the Mackay reservoir dam.

Project Area 3B: No historic resources were observed in the project area.

ARCHAEOLOGICAL RESOURCES PROJECT SUMMARY

Project Areas 3A and 3B: Archaeological resources have the potential to be located in the project area; however, at the time of the reconnaissance, no sites were observed.

TRADITIONAL CULTURAL RESOURCES PROJECT SUMMARY

Project Areas 3A and 3B: Traditional cultural resources have the potential to be located in the project area; however, during the reconnaissance, no sites were observed and to date there has been no government-to-government consultation with Native American Tribal Governments.

5.7.4 Segment 4: SH 28 From Leadore To Salmon

This segment extends northwesterly for approximately 45 miles from Leadore to Salmon within Lemhi County, Idaho. The corridor follows the Lemhi River to its confluence with the Salmon River, near Salmon. The highway follows a broad and low, semi-arid corridor between the Lemhi Range to the southwest and the Beaverhead Mountains and the continental divide to the northeast. The valley consists of basin-fill sediments and stream deposits.

LAND OWNERSHIP PROJECT SUMMARY

Project Area 4A: All lands within and adjacent to Project Area 4A are public lands administered by the Idaho Falls District of the BLM, the Salmon-Challis National Forest, or are privately owned (90 percent).

GEOLOGY AND SOILS PROJECT SUMMARY

Project Area 4A: Areas of prime farmland along Project Area 4A include irrigated and not-irrigated classifications. No mines are located within the project area. Several fault zones have been identified within the project area including a normal fault that parallels the north side of project area from milepost 109 to 112.7. This project has a low risk for earthquakes. Three soil map units have poor road suitability for flooding, wetness, and strength (soil units 37, 44 and 123).

WATER RESOURCES PROJECT SUMMARY

Project Area 4A: The Lemhi River and its floodplain border the majority of the project area. A total of 92 wells have been identified within the project area including; 84 domestic, one municipal, one commercial, one fire protection, one irrigation, one stock, and three 'other' well types.

WETLAND PROJECT SUMMARY

A total of 18.3 miles of wetlands or areas that exhibit some wetland characteristics are located within the project area.

NOISE PROJECT SUMMARY

Project Area 4A: The project area is principally in a rural setting. However, residences along the corridor would be considered sensitive noise receptors.

HAZARDOUS MATERIALS PROJECT SUMMARY

Project Area 4A: The Tendoy Store and gas station is within the project area but is unlikely to be affected by the proposed project.

VEGETATION PROJECT SUMMARY

Project Area 4A: No T&E plant species are expected to occur within the vicinity of Project Area 4A. Special status plant species with element occurrences in the project area include: Idaho range lichen near milepost 124.3 (west of the Lemhi River), and Lemhi milkvetch from milepost 109-109.4. Noxious weeds were not observed during the field survey. Areas within the project area that are related to water resources and wetlands are considered no-spray areas. Depending upon the extent of brush clearing associated with Project Area 4A, there could be a potential impact to fisheries.

WILDLIFE PROJECT SUMMARY

Project Area 4A: T&E species with the potential to be located in Project Area 4A include the bald eagle, Canada lynx and gray wolf. The Lemhi River along the entire reach of Segment 4 has been identified as a bald eagle wintering area. Two element occurrences of unconfirmed lynx specimens have been recorded at milepost 115.5 to 118, and milepost 104 to 111.4. The Segment 4 study area is within the Central Idaho Wolf Recovery Area. Crucial winter range for deer is present on the east side of the corridor from milepost 107 to 122 and milepost 125 to 127. Project Area 4A experiences high rates of collisions with both mule deer and white-tail deer. In addition, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

FISHERIES PROJECT SUMMARY

Project Area 4A: T&E fish species found in the project area include: bull trout, steelhead, and Chinook salmon during the spring run. Special status fish species including cutthroat trout, westslope cutthroat trout, and Pacific lamprey are also known to occur within the Lemhi River drainage throughout the year. According to the USFS fisheries biologist, routine brush clearing activities should not affect fish habitat. The extent of brush clearing associated with Project Area

4A was unknown at the time of the study, but may impact fisheries habitat if brush clearing is extensive.

HISTORICAL RESOURCES PROJECT SUMMARY

Project Area 4A: Twenty-one potentially historic homesteads, one store/gas station, one cabin and Fort Lemhi are present in the project area. Two cultural resources clearances were obtained for this project area including: milepost 128 to 129 cleared in 2000, and milepost 130.1 to 130.2 cleared in 1999.

ARCHAEOLOGICAL RESOURCES PROJECT SUMMARY

Project Area 4A: Archaeological resources have the potential to be located in the project area; however, at the time of our reconnaissance, no sites were observed.

TRADITIONAL CULTURAL RESOURCES PROJECT SUMMARY

Project Area 4A: Traditional cultural resources have the potential to be located in the project area; however, during our reconnaissance, no sites were observed and to date there has been no government-to-government consultation with Native American Tribal Governments.

5.7.5 Segment 5: US 93 From Salmon To The Montana State Line

This segment extends northerly along the Salmon River for approximately 21 miles from the town of Salmon to Northfork where the North Fork of the Salmon River joins the main stem. The highway then climbs for more than 3,300 feet through the Salmon-Challis National Forest to Lost Trail Pass (6,995 feet above mean sea level) at the Montana state line. This 45 mile segment is referred to as the Salmon River Scenic Byway and is flanked by the Bitterroot Mountains along the continental divide on the northwest and east and the Salmon River Mountains on the southwest.

LAND OWNERSHIP PROJECT SUMMARY

Project Area 5A and 5B: All lands within these projects are either privately owned, or are public lands administered by the Idaho Falls District of the BLM (Salmon Field Office) or the Salmon-Challis National Forest.

Project Area 5C and 5D: All lands within these projects are either privately owned, or are public lands administered by the Salmon-Challis National Forest.

Project Area 5E: All lands within Project Area 5E are public lands administered by the Salmon-Challis National Forest.

GEOLOGY AND SOILS PROJECT SUMMARY

Project Area 5A: No prime farmland or mines have been identified within this project area. In addition, neither fault zones nor earthquake hazards affect Project Area 5A. A severity 2 rock-fall hazard area is located between milepost 317.0 to 317.4. One soil map unit within the project area has poor suitability for road stability for flooding, wetness and strength (soil unit 37).

Project Area 5B: No prime farmland has been identified within Project Area 5B. The Wilcox Prospect mine is located within the project area. A normal fault line crosses the project area at milepost 318.3; however, the area is not prone to earthquakes. Severity 2 rock-fall hazard is present from milepost 318.4 to 318.9. One soil map unit has been rated as poorly suited for road stability for flooding, wetness, and strength (soil unit 37).

Project Area 5C: No prime farmland or mines have been identified within this project area. A fault zone adjoins the east side of the project area, but the area is not prone to earthquake

hazards. A severity 2 rock-fall hazard is located between milepost 326 and 326.1. Unstable soils have not been identified in this project area.

Project Area 5D: No prime farmland has been identified within this project area. The Rathburn Gulch Prospect mine is located within Project Area 5D. A thrust fault exists from milepost 329.5 to 331, but the area is not prone to earthquake hazards. Rock-fall hazards and unstable soils have also not been identified in this project area.

Project Area 5E: No prime farmland has been identified within this project area. One mine is located within Project Area 5E; the North Fork Salmon River Placer at Pierce Creek. Neither fault zones nor earthquake hazards affect Project Area 5E. Rock-fall hazards and unstable soils have also not been identified in this project area.

WATER RESOURCES PROJECT SUMMARY

Project Area 5A: The Salmon River and its floodplain are immediately adjacent to Project Area 5A for its entire length. No wells have been identified within this project area.

Project Area 5B: The Salmon River and/or its floodplain are immediately adjacent to Project Area 5B on the northwest side for the entire length of the project. One domestic well has been identified in Project Area 5B.

Project Area 5C: The Salmon River and/or its floodplain are immediately adjacent to the southwest side Project Area 5C from milepost 325.65 to 326.1. The project crosses the North Fork of the Salmon River and its floodplain at milepost 326.25, and is immediately adjacent to the river at milepost 327. The Salmon River at the town of Northfork is designated as a Wild and Scenic River. Nine domestic wells, one fire protection well, and one cathode well have been identified in Project Area 5C.

Project Area 5D: The North Fork of the Salmon River and/or its floodplain are adjacent to the west side of Project Area 5D from milepost 329 to 330.1, and from milepost 330.7 to 331. Nine domestic wells have been identified in Project Area 5D.

Project Area 5E: The North Fork of the Salmon River is approximately 0.25 mile east of Project Area 5E. No floodplains affect this project. Two domestic wells have been identified in Project Area 5E.

WETLANDS PROJECT SUMMARY

Within the identified project areas, 2.8 miles are adjacent to wetlands.

NOISE PROJECT SUMMARY

Project Areas 5A, 5B, 5D, and 5E: These project areas are within rural areas. No sensitive noise receptors were identified.

Project Area 5C: The town of Northfork is within Project Area 5C. There are several residences along the highway within the project area that would be considered sensitive to noise.

HAZARDOUS MATERIALS PROJECT SUMMARY

Project Areas 5A, 5B, 5D and 5E: There are no known hazardous material sites within the proposed project areas.

Project Area 5C: The North Fork General Store/Café and gas station is a potential hazardous material site.

VEGETATION PROJECT SUMMARY

Project Area 5A: No T&E plant species are likely to occur in Project Area 5A. In addition, no special status plants have occurrence records within the project area, however habitat does exist. Noxious weeds were not observed during the field survey. Areas within the project area that are related to water resources and wetlands are considered no-spray areas. No concerns for brush clearing have been identified in this project.

Project Area 5B: No T&E plant species are likely to occur in Project Area 5B. One special status element occurrence of blue gramma has been identified in the project area. Habitat for other special status plant species also exists. Noxious weeds were not observed during the field survey. Areas within the project area that are related to water resources and wetlands are considered no-spray areas. No concerns for brush clearing have been identified in this project.

Project Area 5C: No T&E plant species are likely to occur in Project Area 5C. One special status element occurrence of flexible alpine collomia has been identified in the project area. Habitat for other special status plant species also exists. Noxious weeds were not observed during the field survey. Areas within the project area that are related to water resources and wetlands are considered no-spray areas. No concerns for brush clearing have been identified in this project.

Project Area 5D: No T&E plant species are likely to occur in Project Area 5D. Two special status element occurrences of flexible alpine collomia have been identified in the project area. Habitat for other special status plant species also exists. Noxious weeds were not observed during the field survey. Areas within the project area that are related to water resources and wetlands are considered no-spray areas. No concerns for brush clearing have been identified in this project.

Project Area 5E: No T&E plant species are likely to occur in Project Area 5E. Two special status element occurrences of northern golden-carpet have been identified in the project area. Habitat for other special status plant species also exists. Noxious weeds were not observed during the field survey. Areas within the project area that are related to water resources and wetlands are considered no-spray areas. No concerns for brush clearing have been identified in this project.

WILDLIFE PROJECT SUMMARY

Project Area 5A and 5B: T&E wildlife species likely to occur within the project area include bald eagle, Canada lynx, and gray wolf. The Salmon River through Project Areas 5A and 5B has been identified as a bald eagle wintering area. There has been one lynx sighting within the vicinity of these project areas. Project Areas 5A and 5B are within the Central Idaho/Northwest Montana Wolf Recovery Area. Special status element occurrences include a record for North American wolverine and a peregrine falcon nesting territory within these project areas. Crucial winter range has been identified on the east side of the project area. Wildlife-related vehicle accidents occur frequently in Project Areas 5A and 5B. In addition, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

Project Area 5C: T&E wildlife species likely to occur within the project area include bald eagle, Canada lynx, and gray wolf. The Salmon River through Project Area 5C has been identified as a bald eagle wintering area. Project Area 5C is within the Central Idaho/Northwest Montana Wolf Recovery Area. Special status element occurrences in the project area include a common garter snake, and one record for a flammulated owl probable nesting territory. Crucial winter range has been identified on the east side of the project area. Wildlife-related vehicle accidents

occur frequently in Project Area 5C. In addition, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

Project Area 5D: T&E wildlife species likely to occur within the project area include bald eagle, Canada lynx, and gray wolf. The Segment 5 study area is within the Central Idaho/Northwest Montana Wolf Recovery Area. One special status element occurrence record of a flammulated owl probable nesting territory has been identified within the project area. Crucial winter range for elk has been identified in the project area. Wildlife-related vehicle accidents occur frequently in Project Area 5D. In addition, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

Project Area 5E: T&E wildlife species likely to occur within the project area include bald eagle, Canada lynx, and gray wolf. Lynx Links habitat crosses Project Area 5E. The project area is within the Central Idaho/Northwest Montana Wolf Recovery Area. A major migration corridor has been identified in the Bitterroot Mountains near Lost Trail Pass near Project Area 5E. Summer and winter range is located on the west side of the project area from milepost 337 to the Montana state line. Wildlife-related vehicle accidents occur frequently in this area. In addition, a significant number of eagle mortalities have been reported in Lemhi County, some of which are attributable to vehicle collisions.

FISHERIES PROJECT SUMMARY

Project Area 5A, 5B, 5C, 5D and 5E: T&E fish species associated with the Salmon River and its tributaries include bull trout, Chinook salmon during the spring run, sockeye salmon, and steelhead. Special status fish species including Westslope cutthroat trout, cutthroat trout, and Pacific lamprey are known to occur within waterways associated with these project areas.

HISTORICAL RESOURCES PROJECT SUMMARY

Project Areas 5A and 5B: No historic resources observed in the project area.

Project Area 5C: Most of the town of North Fork is potentially historic.

Project Area 5D: Two potentially historic homesteads and one house are present in the project area.

Project Area 5E: One potentially historic old building is present in the project area.

ARCHAEOLOGICAL PROJECT SUMMARY

Project Areas 5A through 5E: Archaeological resources have the potential to be located in the project area; however, at the time of our reconnaissance, no sites were observed.

TRADITIONAL CULTURAL RESOURCES PROJECT SUMMARY

Project Areas 5A through 5E: Traditional cultural resources have the potential to be located in the project area; however, during our reconnaissance, no sites were observed and to date there has been no government-to-government consultation with Native American Tribal Governments.

SECTION 6: PUBLIC INVOLVEMENT

The Public Involvement Plan (PIP) for the East Idaho Corridor Loop Plan (EICLP or the Plan) was designed and executed as a fully integrated part of the planning process.

6.1 PUBLIC INVOLVEMENT IN THE LOW VOLUME CORRIDOR PLANNING PROCESS

The goal of the public involvement plan was twofold; first, within the limits of the low volume corridor planning guidelines, appropriately engage corridor stakeholders and residents in the planning process and second, to develop understanding and support for the Plan's final recommendations. **The PIP was managed by the consultant team, under the direction of the ITD Project Manager in coordination with the ITD District 6 Public Information Specialist. The public involvement activities included in the PIP integrated the public, stakeholders, agencies and local governments throughout the process.**

LOW VOLUME CORRIDOR PLANNING FOR THE EICLP: Corridor planning for low volume corridors has specific differences from the procedure used for those corridors with more typical traffic volumes. These differences are illustrated in a less intensive environmental process, reduced steps in alternatives evaluation and reduced public involvement efforts. The public involvement plan for low volume corridors is also more streamlined, gathering input primarily at major decision points, supplemented with very specific activities targeted to meet the unique needs of the low volume corridor and its users. Specifically, the PIP for the EICLP included only two rounds of general public open house events at key decision points; one at the beginning of the project to identify key issues and concerns and one near the conclusion of the process to present and gather comments on the draft plan recommendations.

A transportation advisory committee was not formed for the EICLP. However, to ensure that specific needs were identified and optimum coordination with corridor stakeholders was achieved, targeted "Project Partner Workshops" were held in those communities with outstanding project needs and issues. Communication with affected agencies was also given priority throughout the project. These broader activities were also supplemented with interviews, communication through the media, project materials and a project web page to provide and gather information on line. An outline of the goals, specific activities and associated outcome developed through the EICLP PIP is described below. *(A complete copy of the public involvement plan document is included in the appendix of the Plan)*

6.2 EICLP PUBLIC INVOLVEMENT PLAN GOALS

- To identify and implement specific public involvement activities appropriate for a low-volume corridors that meet corridor, stakeholder and community resident's needs for participation.
- To create sufficient public awareness to the Plan and the opportunities for public involvement.
- To provide opportunities for participation at the beginning and at key decision points during the planning process.

- To thoroughly identify and address stakeholder and corridor resident's most important needs for the function and use of the corridor.

- To foster understanding and support among corridor residents, local governments, agencies, affected entities and key stakeholders for the final Plan recommendations.

6.3 EICLP PUBLIC INVOLVEMENT PLAN OBJECTIVES

- Work with local governments, affected agencies and organizations to get input from stakeholders and the general public to identify and implement the most effective PIP that most closely meets their needs for participation and information and achieves the goals of the Plan;

- Provide positive communications at key decision points in the process with the general public who may have an interest in the Plan;

- Provide ongoing clear communications through an appropriate use of media and activities that will help to reach and involve the greatest number of corridor stakeholders and residents;

- Plan and conduct appropriate public involvement activities throughout plan development that meet the changing needs of the process and corridor residents;

- Execute all public involvement activities with the intent to meet participant needs and achieve broad understanding and support for the Plan's final recommendations.

6.4 PLAN COMPONENTS

The PIP included components to provide information and gather input as part of the overall project steps. The primary components included stakeholder interviews, public open house events, partner project workshops, agency workshop, regional transportation committee work sessions, an ITD staff work session and community presentations. The table below illustrates where the public input opportunities fit within the overall planning process.

FIGURE 15: PUBLIC INVOLVEMENT/PROJECT STEPS

East Idaho Corridor Loop Plan Public Involvement Activities and Project Steps	
Step #1 Identify Issues • Corridor Tour – planning team to tour corridor, review existing conditions and discuss future needs • Stakeholder interviews – introduce the project / identify issues • Meet with elected officials – introduce the project / identify issues	June / Aug 2004
Public Open House #1: *Project Kick Off—Identify Issues*	**July 04**
Step #2 Research existing conditions of the transportation system	June / Aug 2004
Partner Projects Workshops: *Communications, presentations & specific project planning*	**Sept 04**
Step #3 Document existing and land use conditions	Sept / Oct 2004
Step #4 Analyze future travel demand and performance	Oct 2004
Step #5 Review corridor boundary / Develop purpose & need /corridor goals	Oct 2004
Step #6 Identify project areas and generate improvements to meet goals	Sept / Dec 2004
Step #7 Project area environmental scan	Oct/Dec 2004
Agency Workshop – *Preliminary environmental area scan / draft improvement projects*	**Dec 2004**
Step #8 Identify feasible improvement projects and strategies	Dec 04/Jan 05
ITD Staff Work Session – *Environmental area scan and improvement projects*	**Jan 2005**
Regional Transportation Committee Presentations – *Draft projects*	**Feb 2005**
Step #9 Prepare draft project and policy recommendations	Mar / Apr 05
Public Open House #2: *Present Draft Recommended Improvements*	**May 2005**
Step #10 Prepare final low-volume corridor plan	Fall 2005 / Spring 2006

6.5 STAKEHOLDER INTERVIEWS

Twenty interviews were conducted at the beginning of the project to introduce the project, scope of work, schedule of activities and learn of initial issues and concerns. Stakeholders interviewed included representatives from key corridor organizations, agencies, local governments, businesses and individuals as shown in the list of interviewees below.

EICLP Stakeholder Interviewees

- City of Salmon
- City of Challis
- City of Mackay
- City of Arco
- City of Rexburg
- Madison County

- Lemhi County
- Private business owners in Challis, Mackay, Howe and Salmon
- Chamber of Commerce representatives from Mackay, Challis, Salmon and Rexburg
- Bureau of Land Management
- United States Forest Service
- Idaho Department of Fish and Game
- ITD District 6 road maintenance personnel

Public Workshops - Two rounds of public workshops were provided at multiple locations in the corridor to afford an opportunity for general public review and comment at two key decision points during the process. A complete record of the results of the public workshops, including a list of attendees, is included in the Plan appendix.

Public Open House No. 1 *– Arco, Challis, Salmon and Rexburg*
Purpose: To introduce the project and identify issues and concerns.

Public Open House No. 2 *– Mackay, Challis, Salmon and Rexburg*
Purpose: To present and discuss recommended improvements and policies

Highlights of Issues from Stakeholder Interviews and Public Open House No. 1

- *US 93*
  - *Excessive speed through Challis and south and north of Salmon*
  - *High number or wildlife collisions in the canyon between Challis and Salmon and north of Salmon*
  - *Congestion in Salmon through downtown and at US 93/Courthouse Road*
  - *Left turn conflicts north of Salmon at canyon access points for residential development such as Tower Creek and Fourth of July Creek*
  - *Narrow shoulder width between Challis and Salmon*
  - *Insufficient passing lanes between Challis and Salmon*
  - *Sensitive environmental conditions / animal crossings*
- *SH 28*
  - *Narrow shoulder width*
  - *Increasing left turn conflicts south of Salmon and at entrances to public recreation facilities and sites*
- *SH 33*
  - *High speed west of Rexburg adjacent to new residential development*
  - *Left and right turn conflicts west of Rexburg to businesses and new residential development*
- *US 20 / 26*
  - *Slippery roadway surface between Howe and Arco*
  - *Narrow shoulder width*
- *SH 22*
  - *Narrow shoulder width*
- *Corridor-wide Issues*
  - *Minimize environmental impacts when making improvements*
  - *Maintain the "Local Environment" through context sensitive design techniques when planning improvements*
  - *Narrow shoulder widths*
  - *Animal collisions*
  - *Lack of adequate bike/pedestrian facilities*

- *Inadequate number and location of passing lanes*

6.6 EICLP CORRIDOR PURPOSE AND NEED STATEMENT

The purpose and need statement was developed based on input from the initial technical assessment and corridor tour, interviews and outcome from the first round of public open house events. The "Purpose" describes the reason for the Plan and the "Needs" describe outstanding issues and conditions that need to be addressed to achieve the desired future conditions of the corridor.

6.6.1 Purpose

The purpose of the Eastern Idaho Corridor Loop Plan is to assess roadway conditions and growth patterns within the corridor study area and to develop recommendations for improvements and management that meet corridor needs for the next 20 years.

6.6.2 Need

- Safe design of corridor facilities with attention to:
  - Roadway and shoulder width
  - Horizontal curvature
  - Number and location of passing lanes
  - Protection and warning devices such as guardrails and reflectors
  - Intersection safety and capacity
- Safe access to new development adjacent to the corridor
- Year-round connectivity to local, regional, and statewide destinations
- Adequate bike and pedestrian facilities to support local and regional use
- Adequate signage to support adjacent community needs
- Decreased vehicle / wild and domestic animal collisions
- Sufficient bridge condition and capacity to meet corridor and user needs

6.7 CORRIDOR GOALS AND OBJECTIVES

Corridor goals and objectives were developed based on the Purpose and Need statement and the input gathered through stakeholder interviews, public workshops, corridor tours and initial technical assessment. Goals were later reviewed and refined as part of regional project workshops, agency and ITD staff work sessions. The goals and objectives were used to evaluate potential projects to determine the projects that best support the corridor's purpose and need and meet the needs of the corridor and users.

SAFETY: Improve safety throughout the corridor for all modes of travel

- Access management
- Improved clear zones
- Rumble strips
- Bike / pedestrian facilities
- Adequate passing lanes (where feasible)

REDUCE CONGESTION WHERE NEEDED

- Determine congestion levels and locations
- Investigate traffic patterns in and around Salmon
- Identify needed capacity improvements
- Investigate intersection capacities

ADEQUATE ROADWAY GEOMETRICS

- Apply Idaho Transportation Department (ITD) minimum design standards
- Establish and apply parameters for reflectivity and guard rail placement
- Determine minimum design speed for improvements at curves, passing areas, etc.
- Adjust horizontal curve design as needed

APPLY CONTEXT SENSITIVE DESIGN

- Identify areas to apply context sensitive design
- Utilize ITD context sensitive design guidelines
- Include bicycle and pedestrian facilities where needed

REDUCE WILDLIFE COLLISIONS

- Investigate areas of high wildlife collisions
- Determine extent, description and location of areas with higher than average wildlife collision incidents
- Investigate appropriate treatments to reduce wild animal collisions

SUPPORT PROVISION OF ADEQUATE BIKE/PEDESTRIAN FACILITIES

- Determine the most appropriate type of facility to meet user needs; separated, shoulder, hard or soft surface, etc.
- Connect to local sites and attractions where feasible
- Plan bike and pedestrian facilities in conjunction with overall community or regional bike/pedestrian plans where appropriate
- Consider bike/pedestrian enhancements and facilities in project designs for corridor improvements.

SUPPORT ECONOMIC DEVELOPMENT

- Pursue appropriate highway signage that supports community, tourism and business needs

ENHANCED COORDINATION

- Implement activities that enhance planning, coordination and communication between ITD and local governments
- Regular ITD review of proposed major new developments to maintain corridor safety and effective operation

6.8 AGENCY PARTICIPATION

Agency Interests: The National Forest Service representing the Salmon, Challis, and Targhee Forests and the Bureau of Land Management have a keen interest in the corridor due to their substantial amount of adjacent land ownership, public facilities and resource management responsibilities. The Idaho Department of Fish and Game Department (IDFG), Idaho Department of Water Quality and United States Fish and Wildlife Service have interests in the corridor's wildlife and natural resources. The IDFG has additional interests due to the many sportsmen's access points along the corridor. The Idaho Department of Parks and Recreation has a park site and visitor center (Land of the Yankee Fork) at the intersection of SH 75 and US 93 in the corridor, just south of Challis. Additional oversight of the process was performed by the Federal Highway Administration.

Agencies Involved in the EICLP

- Bureau of Land Management

- USFS – Challis/Salmon/Targhee National Forest
- Idaho Department of Fish and Game
- Idaho Department of Parks and Recreation – Land of the Yankee Fork
- US Fish and Wildlife Service
- Federal Highway Administration
- Idaho Department of Water Resources
- Idaho Transportation Department

Agency Role: Involvement of the agencies that are affected by the corridor, or whose activities had potential impact on the corridor, were important to the process. They were engaged throughout the process through one-on-one interviews, attendance at public open house events and at a special agency meeting to discuss issues relevant to them. Through these opportunities, in formal and informal settings the agency representatives helped identify issues, discussed the results of the environmental scan, and reviewed and commented on draft improvements and policy recommendations. The agencies also assisted in review of potential implementation strategies and helped identify potential partnerships with their organizations to enhance project improvements.

Agency Workshop: An agency workshop was held in Rigby at the ITD District 6 office in December 2004 to explain the planning process, gather comments on corridor purpose and need, identify goals, discuss preliminary environmental scan information, review the list of draft improvement projects and identify opportunities for partnerships in project implementation.

Agency Workshop Results Highlights: a complete copy of the workshop results is included in the appendix.

- Improvement Project Comments
  - Consider the planned regional ATV trail in planning for corridor improvements
  - Enhanced turn lanes are needed at the Lost River public fishing access north of Mackay
  - Consider public land access points for determination of needed access improvements; IDFG, USFS and BLM staff will assist
  - Fish passage issues need to be identified and considered
  - ITD should partner and coordinate with IDFG to plan and implement brush clearing along SH 28 and the Lemhi River to avoid negative impact to the stream and wildlife habitat

- Environmental Scan Comments
  - Consider tribal resources and interests as part of the environmental scan
  - Consider the "Birding Trail Corridor" map as a reference in planning projects to minimize impacts and to assist in identifying locations for interpretive turnouts
  - A historic cattle crossing area over the Salmon River along US 93 near Salmon needs to be identified and considered
  - Additional enhancement and safety improvements on US 93 near Ellis are needed to improve both pedestrian and motorist safety at this popular fishing location

- *Note: The entire list of 65 recommended improvement projects, with modifications based on input from the agency workshop and the ITD work session, was sent to all affected and interested agencies for additional review and comment prior to developing the final plan.*

6.9 PROJECT PARTNER WORKSHOPS

Project partner workshops were held in Challis and Salmon in September 2004 to allow for more detailed planning with community residents on significant improvement needs, issues and potential projects. Key issues and projects discussed at each of the two workshops are shown below:

Challis Project Partner Workshop Issues / Potential Projects

- Urban street improvements on US 93 through Challis
- Pedestrian safety crossing improvements on US 93 through Challis
- Pedestrian / bicycle facilities improvements that integrate with the planned Challis trail system
- Enhanced signage to improve designation for community entrance and attractions

Salmon area Project Partner Workshop Issues / Potential Projects

- Intersection improvements at intersection of US 93 and Courthouse Drive
- Bike and pedestrian pathway improvements that integrate with the planned Salmon area pathway plan and support connections from City to Sacagawea Center
- Left and right turn improvements to developing residential areas south of Salmon on SH 28 and north of Salmon on US 93 to areas such as Tower Creek and Fourth of July Creek
- Pedestrian safety improvements at south entrance to Salmon on US 93
- Intersection improvements needed at intersection of US 93 and SH 28
- Recognition of the need for further study of a potential US 93 alternate route around Salmon

6.10 ITD STAFF WORK SESSION

A work session with consultant team and ITD staff was held in January 2005 gather input on the corridor purpose and need, goals, environmental scan and proposed improvement projects. ITD staff input represented included environmental, project development, traffic, engineering, planning and design. Highlights of the work session are shown below and were used as reference in making plan adjustments prior to development of final draft recommendations.

ITD Staff Work Session Highlights: agreements and adjustments to draft plan recommendations

- Improvements will be implemented with minimal impact to the natural and man-made environment
- Context sensitive design techniques will be used as a guide for all improvements
- Work with LHTAC to develop incentives for communities which discourage billboards on scenic byways
- Corridor improvements will incorporate bicycle and pedestrian facilities and coordinate with local community plans for bike and pedestrian systems as feasible
- Improvements to state roadways within the Eastern Idaho Corridor Loop will be planned to improve safety when driving at the posted speeds
- ITD will work closely with corridor communities and residents to routinely evaluate recent speed limit changes to set speed limits that are appropriate for safe roadway operation
- Planning for corridor improvements will be done through collaborative processes, involving local communities, elected officials, area residents, affected agencies

and other interested groups as needed to develop the most appropriate project solutions
- ITD will support the efforts of the Idaho Department of Parks and Recreation to develop the planned ATV trail
- ITD will enhance it's coordination and planning with local communities when planning improvements and maintenance projects

Note: ITD staff comments on specific project recommendations are included in the Plan appendix; ITD staff work session results.

6.11 REGIONAL TRANSPORTATION COMMITTEE WORKSHOPS

Regional transportation committee members and state and local elected officials were invited to special workshops in Challis and Salmon in February 2005 to discuss and provide comments on draft project recommendations. Attendees included local elected officials and administrative staff. State legislature elected officials were not able to attend due to ongoing legislative session, but were sent draft materials for review and comment. A list of workshop attendees is included in the workshop results section of the Plan appendix.

Highlights from the Regional Transportation Committee Work Sessions

- Corridor communities will develop a calendar of events to share in advance with ITD for use in developing project and maintenance work schedules with minimal conflict
- Identified the need and general locations for a greater number of wildlife viewing pullouts in the Salmon area
- Determined the need for increased and enhanced signage to Salmon area attractions, such as the Sacagawea Center and snowmobile trails and access areas
- Incorporate the Salmon area bike pedestrian plans into plans for corridor improvements; with priorities for sections including:
  - Town to the Shoup Bridge
  - Town to the Sacagawea Center
  - Town to the Fairgrounds (north of town)
- Improvement of the Salmon River Bridge crossing in downtown Salmon is a high priority for both ITD and the City of Salmon
- Additional in-depth collaborative study with the community regarding a possible alternate route for US 93 around Salmon is needed in order to develop the most appropriate determination on this issue
- Additional left turn lanes are needed north of Mackay
- Transportation safety measures are needed on US 93 through Challis

6.12 PUBLIC INVOLVEMENT SUPPORT ACTIVITIES AND TOOLS

The following activities and tools were implemented as part of the public involvement process to support and enhance the primary elements;

- Media Coverage (Newspaper, Radio and TV) – media releases and advertisements were published prior to each public open house that illustrated current plan status and alternatives, as well as to invite corridor residents to upcoming public events.

- Public Comment Forms – were available at each public open house event, were sent with newsletters and were available on the Plan web site to provide on-line opportunity for comments.

- Plan Brochure – developed and distributed at project initiation and during the project to introduce the project, planning process, schedule, and contact information.

- Newsletters (2) – developed and distributed to the project mailing list, at project events, and individual meetings and presentations.
    - Newsletter #1 – described the project status, key issues and concerns and corridor goals and objectives.
    - Newsletter #2 – described the project status, proposed improvement projects, recommended policies and invitation to Public Open House #2.

- Plan Mailing List – created for ongoing use and notification of upcoming project events. Mailing list included project team, affected ITD staff and agencies, local governments, stakeholders and general public that signed in at previous public open house events.

- Plan Web site and E-mail address – to provide ongoing plan status and information, existing conditions, recommended improvements, draft plan recommendations and opportunities to gather additional input.

- Presentations – presentations on plan status were given in May 2005 to the Mackay City Council and the Salmon Chamber of Commerce to gather comments on corridor improvements and policy recommendations.

- Contact Information – names, addresses and phone numbers for the ITD project administrator, consultant team project manager and public involvement coordinator were provided in the plan brochure, newsletters and the plan web site for stakeholders and general public as contacts for more information.

6.13 PARTICIPATION OVERVIEW

Participation in the process was highlighted in the one-on-one stakeholder interviews, project partner workshops, regional transportation committee workshops, ITD work session and use of the project web site. Substantial comments were received via mail-in comment forms and via the project web site. The final plan recommendations, including improvement projects and policies are representative of the input of corridor residents, agencies, and stakeholders. Many revisions, refinements and additions are due specifically to comments received during the process in order to best achieve the corridor goals and meet the needs of the corridor and residents. The complete results of all public involvement activities and events, copies of agendas, newsletters, media releases, etc. is included in the appendix of the plan.

SECTION 7: PLAN RECOMMENDATIONS

7.1 POLICY RECOMMENDATIONS

The following policy recommendations are designed to support the safe and efficient function of the roadways in the Eastern Idaho Corridor Loop. These policies are intended to compliment and enhance the integration of the Idaho Transportation Department's management of the corridor with local communities, counties, affected agencies and their associated land use and management policies.

For policies to be effective, it is recommended that the local governments within the corridor implement the Eastern Idaho Corridor Loop Plan as an extension of their comprehensive plans as it relates to transportation planning. Further, these policies should be adopted as a part of the associated land use zoning and development ordinances.

7.1.1 Environmental Impacts

- All improvements to state roadways within the Eastern Idaho Corridor Loop Plan will be planned and implemented with sensitivity to the natural and man made environment, with preference to solutions that minimize impacts to the environment.

- All improvements to the state roadways within the Eastern Idaho Corridor Loop will strive to decrease the impact of roadway operation on wildlife and decrease collisions with wildlife.

7.1.2 Improvements Design

- New improvements to the ITD roadways within the Eastern Idaho Corridor Loop will be done in a manner that is context sensitive to the function, aesthetics, safety, and mobility needs of the corridor communities, residents, and businesses.

- New improvements to ITD roadways within the Eastern Idaho Corridor Loop will appropriately accommodate the safe mobility needs of bicyclists and pedestrians. Plans for development of bike and pedestrian facilities will be developed with consideration for existing local plans for bike and pedestrian improvements and in coordination with local communities and organizations to ensure the most appropriate facility is developed to meet specific local and user needs.

- Improvements to state roadways within the Eastern Idaho Corridor Loop will be planned to improve safety when driving at the posted speeds.

- ITD will work closely with corridor communities and residents to routinely evaluate and set speed limits that are appropriate for safe roadway operation.

  SUPPORTING ACTION
  - ITD will re-evaluate recent speed changes in areas where there is greater than a 20 mile per hour differential between posted speeds and advisory speed limits through turns to ensure the advisory signs are posted at a sufficient distance away from the corner to allow adequate slowing distance.

  - ITD will support efforts to improve education of drivers regarding what is an appropriate driving speed, regardless of the posted allowable speed.

7.1.3 Coordination of Efforts

- Planning for any new development and improvements to state roadways within the Eastern Idaho Corridor Loop will be done in a collaborative manner, involving the Idaho Transportation Department, all affected local governments, related agencies, interested user groups, and affected property owners and business operators as necessary to ensure the most appropriate improvements are determined and implemented. In addition, the Montana Department of Transportation will be invited to participate as appropriate to enhance the compatibility of US 93 in Idaho with the continuation of US 93 into Montana.

- The Idaho Transportation Department will strive for thorough and effective communication through reasonable efforts to inform local communities and corridor residents regarding planned repair, renovation, and major roadway maintenance activities that significantly impact roadway operation.

  SUPPORTING ACTION
  - ITD will work with local communities to develop an annual calendar of events to use for reference in planning and scheduling roadway maintenance and improvement projects to minimize conflicts.

- The Idaho Transportation Department will work with local counties and communities (including local planning and zoning departments, and school districts) to establish and implement a collaborative planned development review process. It is recognized that a development does not need to access the state highway system directly in order to warrant comments from ITD. Further, conditions of approval may be warranted for local developers to be responsible to mitigate impacts to the functionality of the state highway. This coordination between the state and local units of government should abide by the 3C planning process to be Comprehensive, Continuous, and Coordinated. Furthermore, ITD will work with local communities to seek and provide examples of model ordinances and develop appropriate ordinances which support these efforts.

7.1.4 Multi-modal Route / Coordination

- The Idaho Transportation Department will support the development of the proposed Multi-modal Trail (coordinated by Idaho Department of Parks and Recreation) in the southern part of the corridor connecting Arco, Mackay, and Challis.

7.1.5 Public Transportation

- ITD, through their Division of Public Transportation, will support local efforts to develop and provide appropriate public transportation services and support related roadway improvements such as pullouts and signage to meet the needs of senior citizens and other residents desiring these services.

7.2 RECOMMENDED PROJECT AREAS

The following recommended project areas are designed to support the safe and efficient function of the roadways in the Eastern Idaho Corridor Loop.

7.2.1 Capacity Improvements

Provision for passing lanes, hill climbing lanes, pullouts, and other improvements to provide opportunities for slow-moving vehicles to move out of the main travel-way to allow faster-moving vehicles to pass.

US 93

This stretch of highway between Challis and Salmon has very difficult terrain and many slow speed advisory curves. The areas listed below are potential sites identified during repeated trips through the area, consultation with ITD maintenance staff, and review of USGS Quad maps, to determine where passing lanes may be installed:

- Project 111: Milepost 254.0 to 256.0 Passing lane area
- Project 112: Milepost 261.5 to 263.7 Passing lane area
- Project 113: Milepost 264.5 to 266.0 Passing lane area
- Project 114: Milepost 268.0 to 269.0 Passing lane area
- Project 119: Milepost 275.1 to 277.0 Passing lane area
- Project 123: Milepost 294.2 to 296.0 Passing lane area
- Project 118: Milepost 272.7 to 273.4 Pullout Lane – This area is not long enough for a passing lane but may be effective as a pull out lane to allow slow moving vehicles to move out of the mainstream to allow other traffic to pass.
- Project 121: Milepost 285.3 to 286.0 Pullout Lane – This area is not long enough for a passing lane but may be effective as a pull out lane to allow slow moving vehicles to move out of the mainstream to allow other traffic to pass.
- Project 125: Milepost 300.5 to 304.6 (Intersection with SH 28) Widen to 4 Lanes – this part of the roadway between the intersection and the Salmon Airport is growing and higher intensity commercial uses have been or are being developed. Widening the road to 4 lanes would allow for improved traffic circulation through the community and to adjacent land uses.
- Projects 129 & 130: Milepost 317.0 to 317.4 and Milepost 317.75 to 318.4 Pullout Lane – These areas are not long enough for a passing lane but may be effective as a pull out lane to allow slow moving vehicles to move out of the mainstream to allow other traffic to pass.
- Project 133: Milepost 325.65 to 327.0 Climbing Lane – This area is on a grade that causes truck traffic to slow considerably and wherein a climbing lane would be effective at providing an area to allow slower traffic to pull out of the mainstream flow and allow others to pass.
- Project 134: Milepost 329.0 to 331.0 Passing lane area
- Projects 135 & 136: Milepost 333.0 to 334.0 and Milepost 336.0 to 337.0 Climbing Lanes – These areas are on grades that cause truck traffic to slow considerably and wherein climbing lanes would be effective at providing areas to allow slower traffic to pull out of the mainstream flow and allow others to pass.

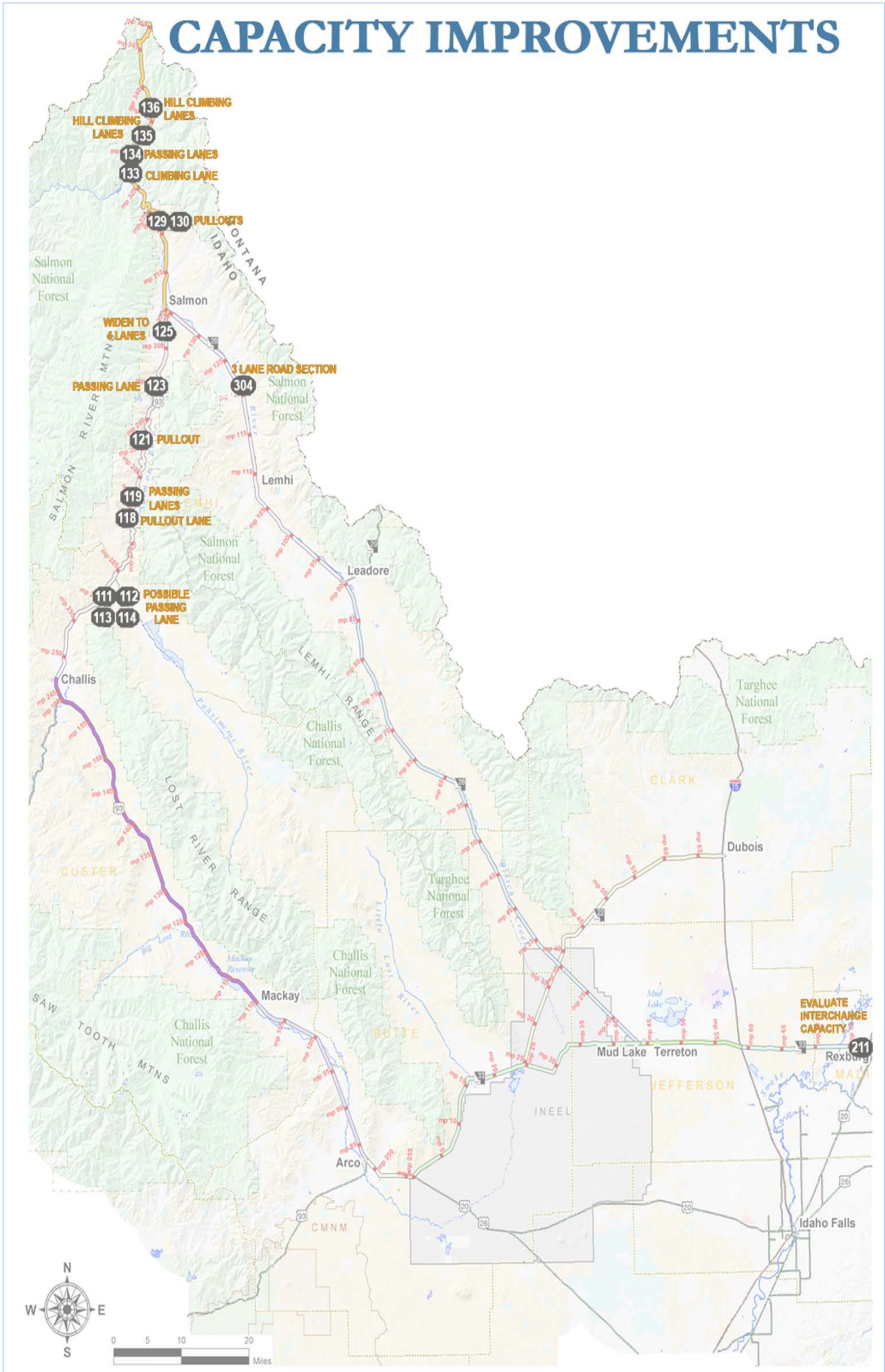
SH 33

- Project 211: Intersection with US 20 Evaluation of Interchange Capacity – Currently, all legs of the intersection "throat" are being evaluated for geometrics, truck use capacity, and a right turn lane to southbound US 20.

SH 28

- Project 304: Milepost 119.2 to 119.4 QB Corporation Truck Movement – 3 Lane Road Section – QB Corporation, producer of Gluelam building beams, routinely experiences truck traffic entering and exiting the site. A center turn lane may aid in providing space for turning trucks to move out of the mainstream flow and make safer left turns off and onto the highway.

MAP 6: CAPACITY IMPROVEMENTS



7.2.2 Turn Lanes

Additional lanes allow turning vehicles to exit the vehicle traffic stream prior to slowing for a turn. Project locations as noted below are those which were identified by community members and project staff as having higher amounts of turning movements.

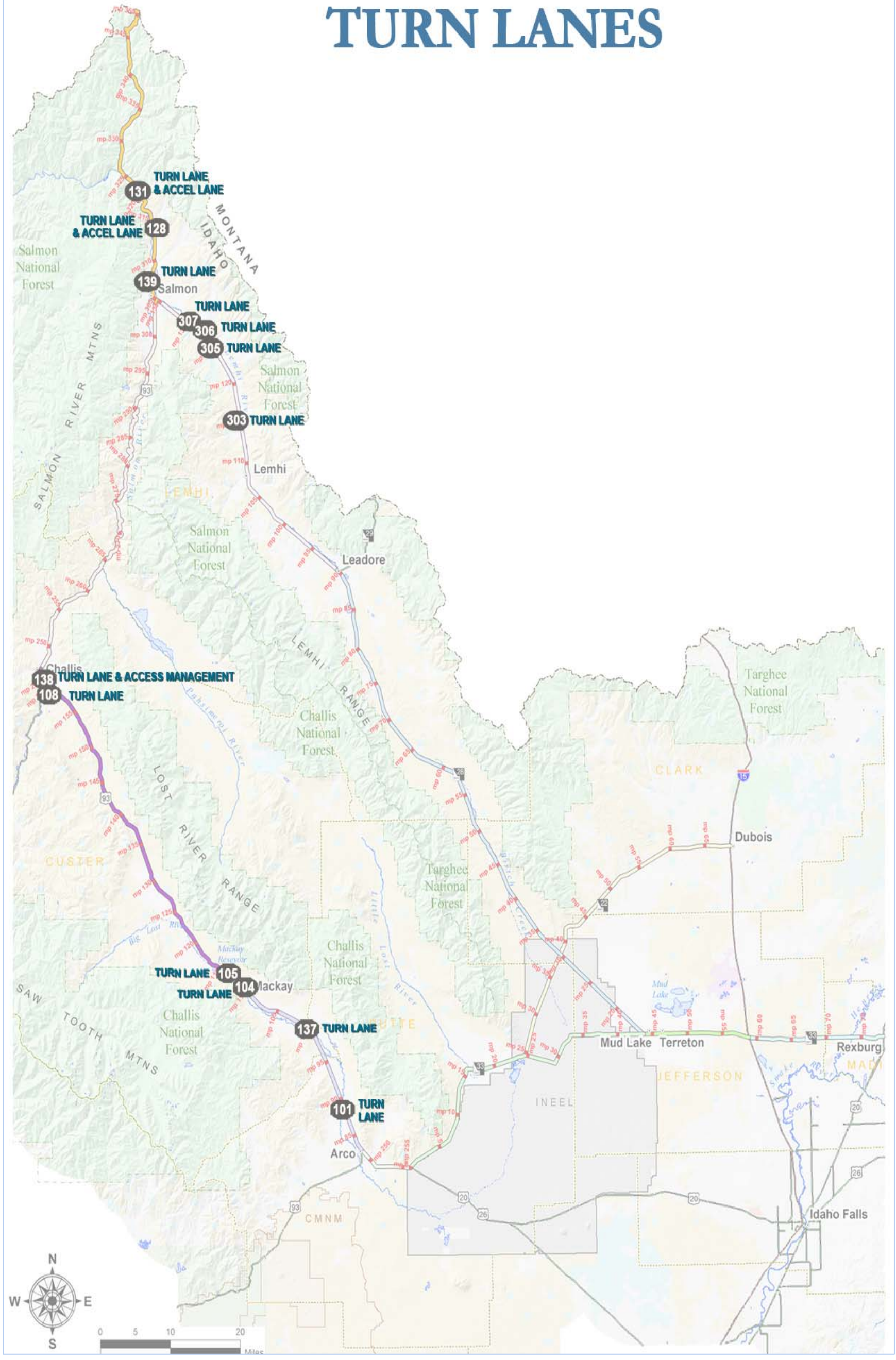
US 93

- Project 101: Milepost 88.4 Turn Lane Construction
  Project 108: Milepost 158.9 Hot Springs Road Turn Lane Construction
  Turn lanes are suggested in areas where traffic conflicts have occurred and wherein turning vehicles may move out of the main traffic stream to reduce conflicts and improve safety.
- Project 104: Milepost 111.25 Turn Lane into Campground – This camping location experiences a high volume of seasonal traffic wherein a turn lane for both left and right turning movements would provide storage for safety.
- Project 105: Milepost 113.5 Turn Lane into Campground – This campground has undergone substantial improvement and is expected to become very popular; a turn lane for both left and right turn movements would provide storage for safety.
- Project 128: Milepost 315.7 Turn Lane and Acceleration Lane at Tower Creek Road
  Project 131: Milepost 321 Turn Lane and Acceleration Lane at 4th of July Creek Road
  These intersections each have poor sight distance which is compounded by drivers using a northbound right hand turn lane to accelerate when turning onto the southbound highway. A reconfiguration of these intersections would be appropriate to allow drivers to pull into and out of the roadway safely.
- Project 137: Milepost 100.7 Turn lane at Huston Road - Left turn lane (northbound) on US 93 to turn onto Huston Rd. Consider a change in grade for sight distance problem at the intersection.
- Project 138: Milepost 244.3 Turn lane & Access Management - Left turn lane at the junction of US 93 and SH 75 into the "Junction" gas station and convenience store south of Challis.
- Project 139: Milepost 306.0 Turn Lane at Elks Road - Turn lanes are suggested in areas where traffic conflicts have been noted, and removing a turning vehicle out of the traffic stream can improve safety on the highway.

SH 28

- Project 303: Milepost 116.25 Turn Lane at Tendoy
- Project 305: Milepost 126.7 Turn Lane at Baker
- Project 306: Milepost 129.2 Turn Lane to Bohannon Creek
- Project 307: Milepost 133.6 Turn Lane into Thomas Estates
  Turn lanes are suggested in areas where traffic conflicts have occurred and wherein turning vehicles may move out of the main traffic stream to reduce conflicts and improve safety.

MAP 7: TURN LANES



7.2.3 Safety

As recognized by project staff, community members, and the analysis of accident statistics, the following projects have been identified as measures to be incorporated to improve safety on the roadway.

US 93

- Project 107: Milepost 147 to 151 ITS Application of Ice Sensors and DMS Signs through the Canyon – The canyon area south of Challis has frequent ice build up due to shadowing over the roadway; areas approaching the canyon may be clear of snow yet black ice is present in the canyon. This unexpected situation may be mitigated using roadway sensors and variable message boards to alert drivers to the current conditions.
- Project 106: Milepost 116.5 to 118.0 Signage for Truck Speed – This area is a corner at the bottom of a downhill grade where several trucks have tipped over. The superelevation of the curve, as well the posting of speed advisory signage in advance of the corner should be reviewed.
- Project 110: Milepost 249.5 Truck Speed and Curve Advisory Signage – This area has a curve that is difficult for trucks to negotiate without considerable slowing to well below the posted speed limit; advisory signs need to be posted to alert drivers of the approaching curve. The superelevation may need to be revised although a flattening of the curve may cause an increase in speeds; public education may be warranted to remind drivers of proper driving techniques for specific roadway conditions.
- Project 115: Milepost 264 Pahsimeroi River Sportsman Parking Improvements – Parking restrictions along the highway should be considered, and parking at the BLM site south of the river confluence should be encouraged. A pedestrian walkway could be added, and blocking vehicle travel between the parking area and the fishing area could be incorporated to improve safety.
- Project 120: Milepost 280.0 to 283.7 Guardrail Along River
- Project 122: Milepost 291 to 292.3 Guardrail Along the River

  These areas need to be examined for the potential installation of a guardrail wherein there are narrow shoulders and numerous embankment crashes have occurred. While the guardrail may be desirable, there are locations where the steepness and material make-up of the embankment makes installation impractical.
- Project 124: Milepost 297.8 Bank Stabilization and Washout Problems – This area is subject to roadway washout conditions during high-water events. Bank stabilization could aid in reducing erosion and undermining the roadbed.
- Project 127: Milepost 309.5 to 310.2 Evaluation of No-Passing Zone through Carmen – The small community of Carmen is currently striped as a passing zone wherein it is suggested that a no-passing zone be incorporated due to the higher level of commercial and residential development adjacent to the highway.
- Project 132: Milepost 326.0 Access Management at North Fork Service Station – The frontage along the service station property consists of rolled curb with no clearly delineated access point. Requiring the establishment of an internal lot circulation pattern and defined ingress /egress points would reduce the potential for vehicle conflicts in the area. In addition to cross-access requirements, advisory signage could be installed in advance of the open access area.

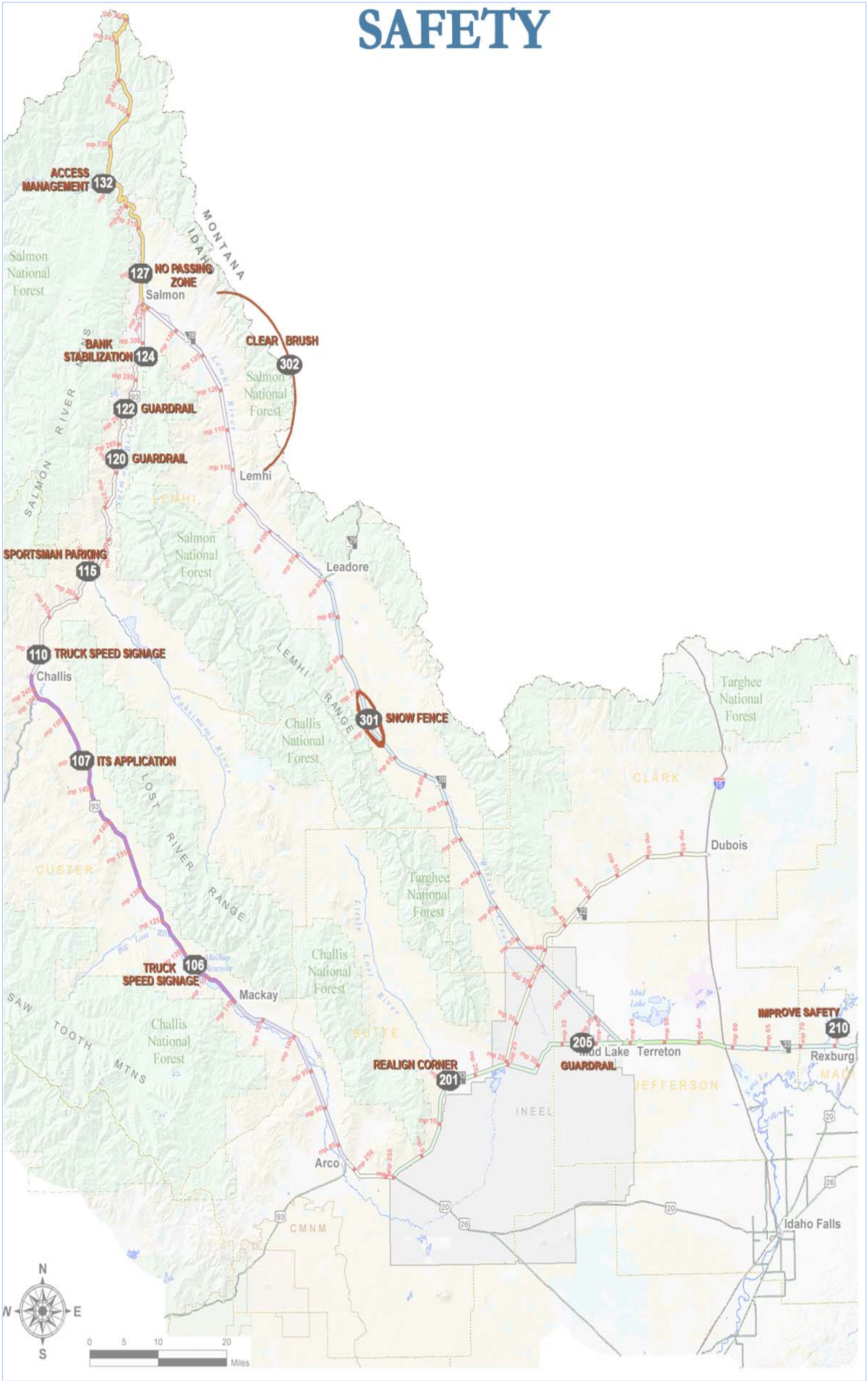
SH 33

- Project 201: Milepost 15.5 to 16.5 Realignment of Corner at Howe – To remain on the highway requires the driver to maneuver around a ninety-degree turn; a "T" intersection with Howe would allow for easier movement on SH 33.
- Project 205: Milepost 36.5 to 38.0 Guardrail Design Evaluation – The current guardrail in this area creates a drifting problem during winter storm events; the lesser profile box-beam type rail may make drifting less prevalent in the area.
- Project 210: Milepost 77.0 to 78.0 Safety Improvements – The majority of the crashes in this area are due to the curvature of the highway, according to police reports. With the addition of turn lanes and widening of the roadway, the existing curve alignments may be adequate if speed is reduced in the area since it is apparent that high speeds rather than curvature is the causal factor.

SH 28

- Project 301: Milepost 75.0 to 68.0 Evaluation of Snow Fence – Prone to high winds and whiteout conditions during winter storm events, a snow fence installed in this area would reduce the whiteout and roadway snowdrift conditions.
- Project 302: Milepost 109.0 to 133.0 Clearing of Brush to ROW Line – Dense brush material encroaches upon the roadway shoulders in this area in which a driver has little sight distance and reaction time should wildlife hidden in the brush choose to run into the roadway. Brush removal has serious environmental concerns associated with the action and therefore proper planning with the Idaho Department of Fish and Game is necessary to resolve both the environmental and roadway safety issues. Advisory signage in advance of the area may be installed to alert drivers of game crossings thick brush sections.

MAP 8: SAFETY


SAFETY
ACCESS MANAGEMENT 132
127 NO PASSING ZONE
Salmon
BANK STABILIZATION 124
CLEAR BRUSH 302
122 GUARDRAIL
120 GUARDRAIL
Lemhi
SPORTSMAN PARKING 115
Leadore
110 TRUCK SPEED SIGNAGE
Challis
301 SNOW FENCE
107 ITS APPLICATION
TRUCK SPEED SIGNAGE 106
Mackay
Dubois
IMPROVE SAFETY 210
205
Mud Lake
Terreton
Rexburg
REALIGN CORNER 201
GUARDRAIL
Arco
Idaho Falls
Salmon National Forest
Challis National Forest
Targhee National Forest
MONTANA
IDAHO
LEMHI RANGE
LOST RIVER RANGE
SAWTOOTH MTNS
SALMON RIVER MTNS
CUSTER
LEMHI
CLARK
JEFFERSON
BUTTE
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7.2.4 Urban Improvements

The following projects were identified by project staff and community representatives as improvements intended to provide curb, gutter, sidewalk, lighting, bicycle facilities and storm drainage facilities in urbanized areas.

US 93

- Project 103: Clearing of Brush, Shoulder Fill, and Bike Path Installation – A bike path from Mackay to the Mackay reservoir, and further on to the campground, should be constructed as a widened shoulder as opposed to a separated pathway. Identification of a location for the proposed IDPR multi-modal pathway system should be considered for an area other than along the highway.
- Project 109: Milepost 246.0 to 247.0 Curb, Gutter, and Sidewalk in Challis – The accommodation and control of drainage is an issue in the city, in part due to the lack of curb, gutter, and sidewalk along main Street (US 93). During any roadway design and improvements, drainage needs to be addressed where ITD facilities are located within a community.
- Project 126: US 95 – Improvement of Ninety-Degree Curve Intersection – The intersection of US 93 and Court House Road in Salmon is subject to traffic backup on US 93 due to a stop control that allows local traffic to move unencumbered. The installation of a roundabout, traffic signal, or stop signs would provide better traffic flow to those using the highway.
- Project 140: Bike Path in Salmon to the Fairgrounds – Bike path construction between the downtown and the fairgrounds north of Salmon. Coordinate and incorporate appropriate project recommendations from the Salmon Area Bike/Pedestrian Plan, specifically the "93 North Path".

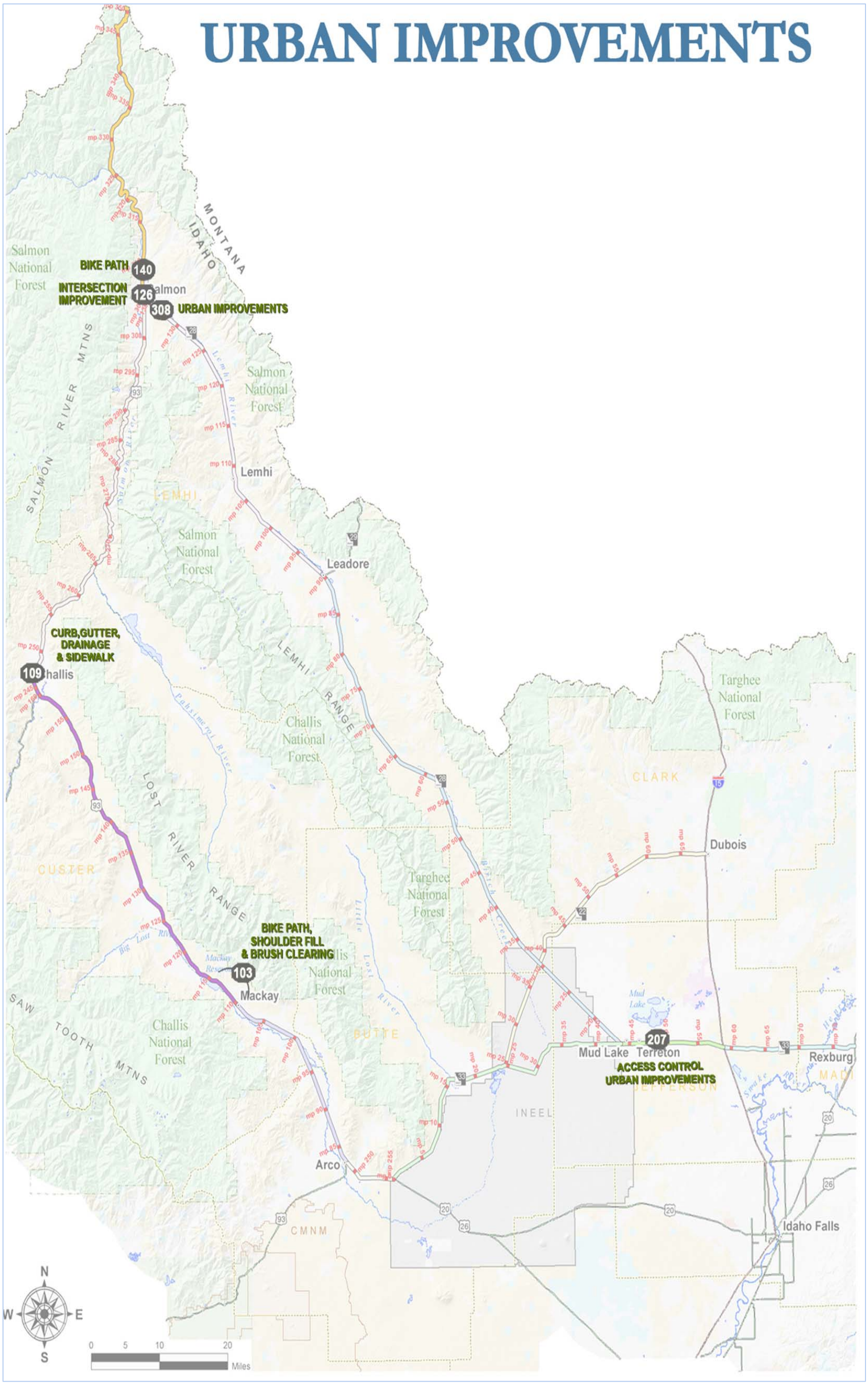
SH 33

- Project 207: Milepost 44.0 to 48.0 Access Control and Urban Improvements – This area in Terreton and Mud Lake has a much higher average of crash incidents, due mostly to drivers turning onto or off the road at multiple locations and being struck by a through-traveling vehicle. Managing and delineating access points will reduce points of conflict and reduce the number of crash occurrences.

SH 28

- Project 308: Milepost 134.0 to 134.5 Urban Improvements at the Sacajawea Center – The new museum and interpretative center could be subject to congestion based on the anticipated high number of visitors to the site (especially during special events). Urban improvements may include extending curb, gutter, and sidewalk from town to the Sacajawea center, adding a bike/pedestrian connection to the Salmon pathway plan, and improving parking and facilities for turning movements.

MAP 9: URBAN IMPROVEMENTS



7.2.5 Modernization

Modernization projects typically involve improving existing highway conditions to meet current transportation facility standards, including the widening of travel lanes, roadway shoulder enhancements, and upgrading substandard intersections.

US 93

- Project 102: Milepost 104.0 to 108.0 Flatten Shoulders – Roadway shoulders in this area are uneven with steep drop-offs; flattening the shoulders would contribute to a more forgiving roadway in the event of a vehicle runoff.
- Project 117: Milepost 269.7 to 269.9 Shoulder Improvement Through the Curve
  Project 118: Milepost 271.9 to 272.1 Shoulder Improvements Through the Curve – These areas consist of slow speed advisory curves are suggested to be improved with wider shoulders instead.

SH 33

- Project 202: Milepost 23.5 to 24.5 Shoulder Improvement – This section of roadway has abrupt-edged shoulders and travels through a lava field in which rocks lay immediately adjacent to the shoulders. Widening the shoulders and removing the rocks in this area would provide more room for those vehicles that may run off the roadway.
- Projects 203 & 204: Milepost 29.0 and 33.3 Rumble Strips to alert Drivers to a Tight Corner – These areas have ninety-degree curves in the road where the addition of rumble strips before entering the curves would alert drivers to the forthcoming sharp corners.
- Project 206: Milepost 38.0 to 44.0 Shoulder Improvement – This section of roadway has abrupt-edged shoulders and travels through a lava field in which rocks lay immediately adjacent to the shoulders. Widening the shoulders and removing the rocks in this area would provide more room for those vehicles that may run off the roadway.

- Project 208: Milepost 62.0 Improve Crossing at Railroad Tracks – The installation of signals and gates at this crossing to warn drivers of oncoming trains should be investigated as a mitigating safety measure; rubber planking in the roadway crossing would aid crossing through-traffic.
- Project 209: Milepost 54.0 to 73.0 Shoulder Improvement – This section of roadway has abrupt-edged shoulders and travels through a lava field in which rocks lay immediately adjacent to the shoulders. Widening the shoulders and removing the rocks in this area would provide more room for those vehicles that may run off the roadway.

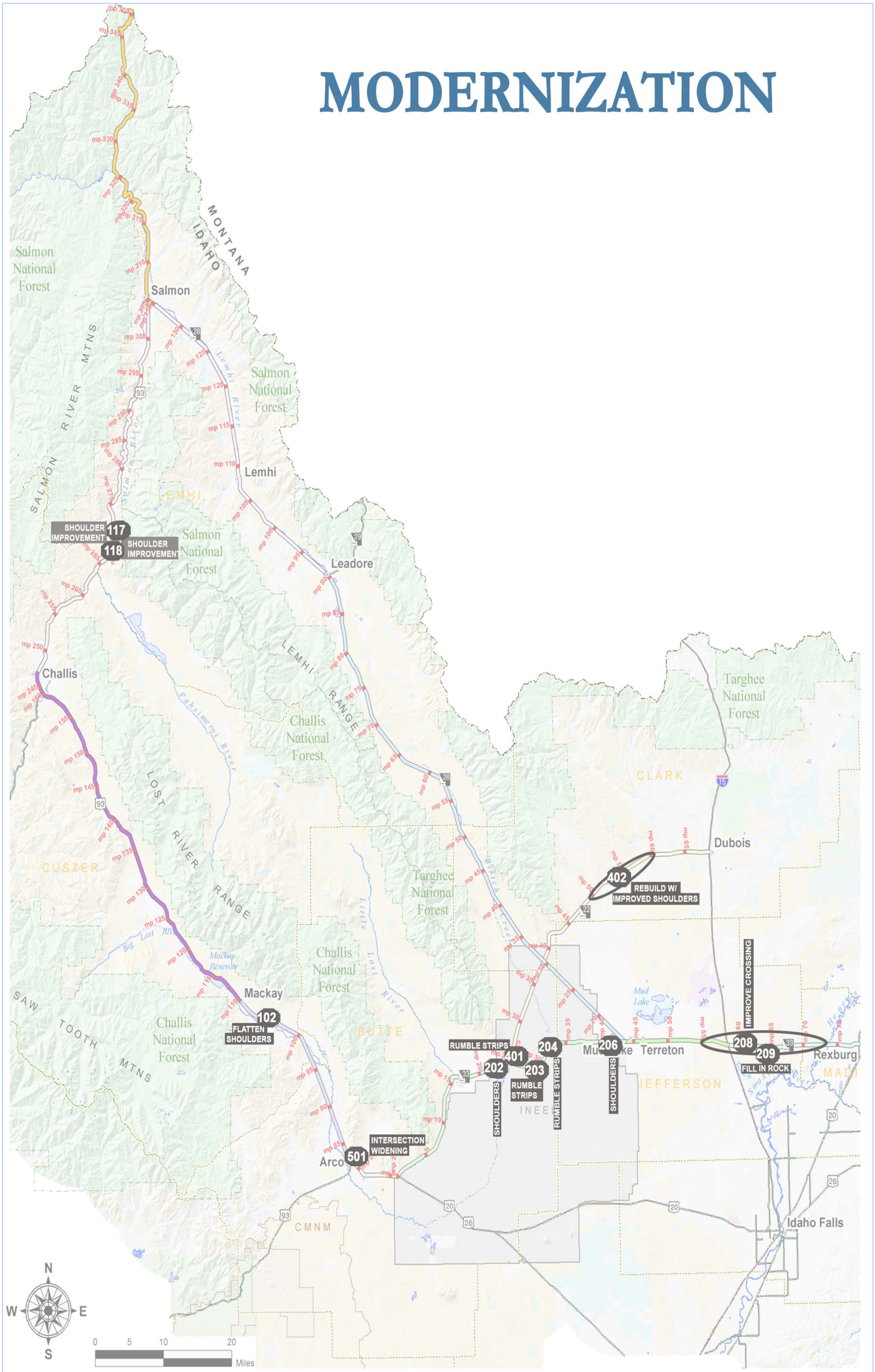
SH 22

- Project 401: Milepost 24.6 to 24.8 Rumble Strips at Intersection with SH 33 – Rumble strips installed on the roadway approach to the intersection would warn drivers of the need to stop.
- Project 402: Milepost 47.0 to 60.0 Roadway and Shoulder Improvements – This section of roadway has yet to be updated to the latest engineering standards; rebuilding of the roadway and widening the shoulders would improve driver expectancy of conditions by creating a consistent roadway section with the remaining portions of the Loop.

US 20/26

- Project 501: Milepost 248.6 Widening the intersection of US 20/26 and US 93 – Intersection widening and possible re-alignment to allow needed space for turning trucks and improve visibility and safety. This project is also recommended in the City of Arco Transportation Plan of 2004.

MAP 10: MODERNIZATION



GLOSSARY

AADT – The annual average daily traffic count for the highway or road segment represented (Total of all vehicles counted in a year divided by 365 days). AADT is calculated annually for all highway segments.

accessibility – the extent to which facilities allow access or contact. In transportation, this refers to the entrance opportunities a roadway allows, usually categorized by the number of entry points per mile.

access control - regulating the location, spacing and the design of driveways, medians, median openings, intersections, and interchanges access based on the type of adjacent roadway.

arterial – a major thoroughfare used primarily for through traffic rather than adjacent land access. Usually these roadways have limited entry points.

ascending passing lane – passing lane along a section of highway with traffic flowing in the direction of increasing mile posts.

capacity – the maximum sustainable flow rate at which vehicles or persons reasonably can be expected to traverse a point or uniform segment of a lane or roadway during a specified time period under given roadway, geometric, traffic, environmental, and control conditions; usually expressed as vehicles per hour.

climbing lane – a passing lane added on an upgrade to allow traffic to pass heavy vehicles whose speeds are reduced.

comprehensive plan – the basic foundational document for local planning which outlines the future needs and establishes policies for the development and improvement of the region's transportation system, infrastructure, land use, and zoning.

degree of curvature – the angle formed by two radii that extend from the center of a circle to the ends of a 100 foot arc. Surveyors determine this by laying a 100-foot tape along the centerline of a highway and measuring the central angle between the two ends.

demographics – characteristics of the population that influence use of products and services. They include age, sex, race, family size, level of education, occupation, income, and location of residence.

descending passing lane – passing lane along a section of highway with traffic flowing in the direction of decreasing mile posts.

FAA – Federal Aviation Administration. This governmental agency is responsible for the safety of civil aviation including the development of regulations and research programs.

functional classification – the classification of the segment of road, as defined by FHWA, which is broken down between rural and urban areas. The functional classification system is based on the grouping of streets and highways into classes, or systems, according to the character of the service they are intended to provide.

GIS – Geographic Information System. This is a system of computer hardware, software, and data for collecting, storing, analyzing, and disseminating information about areas of the earth. From this, GIS can display attributes, such as roadway networks, and analyze results electronically in map form.

geometrics – the spatial and dimensional characteristics of an item. For roadways, this term refers to length, width, superelevation, grade, and curvature.

high flexible pavement – asphalt cement concrete roadway surface of seven inches in thickness or more.

HPMS – Highway Performance Monitoring System. The HPMS is a national level highway information system provided by the Federal Highway Administration (FHWA) that includes data on the extent, condition, performance, use, and operating characteristics of the Nation's highways.

intermodal transportation – network of transportation options working together to provide individual users with a choice of travel services. Modes include, but are not limited to, highways, transit, walkways, railways, airports, and waterways functioning as a unit, with the consequences and benefits of each shared by the entire system.

level of service – a group of characteristics classifying the quality and quantity of use of a given transportation system.

median age – a calculation dividing the population into two parts, with exactly half of the individuals younger and half older than the calculated median.

MUTCD – Manual on Uniform Traffic Control Devices. The MUTCD contains standards for traffic control devices that regulate, warn, and guide road users along the highways and byways in all 50 States.

paratransit – alternate and comparable transportation service for persons with disabilities unable to utilize existing fixed-route public transit options. This service is a requirement of the Americans with Disabilities Act.

platooning – the grouping of vehicles traveling together, either voluntarily or involuntarily because of signal control, geometrics, or other factors.

public transit – local, metropolitan, or regional transportation services, publicly or privately owned, that are available to any person who pays an agreed fare. Included are bus and rail services, as well as any other conveyance provided on a consistent and continued basis.

right-of-way – publicly or privately owned area that allows for passage of people or goods, including, but not limited to, freeways, streets, bicycle paths, alleys, trails and walkways. A public right-of-way is dedicated or deeded to a public entity for use under the control of the public agency.

side friction – coefficient of lateral friction between the design vehicle's tires and the roadway surface. This is a design factor used in determining a suitable superelevation and horizontal curvature for a roadway.

STIP – Statewide Transportation Improvement Program. The STIP is a system which prioritizes transportation projects to be implemented within a given time period.

superelevation – the difference in elevation between the higher outside edge and lower inside edge of a roadway on a horizontal curve. It is required to counteract the centrifugal force generated by the vehicle traveling around the curve.

traffic field reconnaissance – a combination of different techniques to track actual traffic flows through a region and collect data concerning the origins and destinations of vehicles in a certain time period. Intersection turning movement counts, traffic counts, and license plate tracking are all used to perform this operation.

volume-capacity ratio – the ratio, sometimes expressed as a percentage, of the actual number of vehicles using a roadway divided by the maximum number of vehicles the roadway can accommodate. The ratio will always be less than unity (100%).